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JOURNAL

OF THE



CALIFORNIA
1945

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The Acute Meat Shortage

Is a Preventable Misfortune

While in the absence of exact statistical records only round numbers on the loss of meat tonnage from preventable diseases of livestock can be given, estimates are sufficiently large to outline the veterinary profession's task in the field of meat production.

Within the scope of amendable causes of meat shortage are (1) the treatment of livestock maladies without the protective custody of veterinary science; (2) neglected hygiene, sanitation, and vaccination for controlling epizootics; (3) losses from insidious infections, parasites, and sporadic diseases; and (4) lowered reproduction, growth and health of animals from nutritive deficiencies, all of which stem from observations among college-trained veterinarians in the fields of practice and livestock sanitary regulation.

These facts, gained from an important center of animal production, are respectfully submitted for attention in debates over the shortage of meat and other products derived from farm animals.



HOME OFFICES AND BIOLOGICAL LABORATORIES, OMAHA, NEBR.



SERUM PLANT, RALSTON, NEBR.



SERUM PLANT, 44TH ST. AND U ST., OMAHA, NEBR.

The Corn States Serum Co.
Omaha Nebraska

Journal of the American Veterinary Medical Association

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600 S. Michigan Ave., Chicago 5, Ill.

VOL. CVII

JULY, 1945

NO. 820

The Maryland Plan of Veterinary Service

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BRIEFLY, let me outline for you the program that we have in mind. In the first place, in order to achieve, in our campaign against animal diseases and for human health, what I believe is possible, the veterinary profession will have to be less modest about its achievements. In no other profession is there so much hiding of the light "under a bushel." The first step should be an educational campaign to let the people of our great cities and towns understand the extent to which their health depends upon the successful work of the veterinarian. Then we must bring home to the farmers of the state considerably more of the values that lie in the use of your services. The Livestock Sanitary Service is the organization in this state through which we combat animal diseases, in coöperation with the practicing veterinarians. It is under the direction of the Board of Regents of the University, and, consequently, we have an opportunity to build and to carry out a coöperative program such as exists in no other state.

This program will have two main objectives: one, human health; the other, the conservation of our food resources and the consequent economic and social values that will accrue through that conservation to the farmer. So far as coöperation within the framework of our own organization is concerned, I doubt that the veterinarians have fully realized their value in relation to the Departments of Dairy Husbandry, Animal Husbandry, and Poultry Husbandry. On the

other hand, I am just as sure that these educational departments have not realized the values that should come to them through closer association with the Livestock Sanitary Service. In other words, these big educational, research, and extension departments have not made the use of the Livestock Sanitary Service that they could and should, probably because, in most places, they have not been in a legal and organizational position to do so. In this university they are. The objectives of all are the same; namely, to help the farmer economically and socially, and to produce more and better food. We shall bring about this type of coöperation in which each of these large groups, striving to reach the same objective by different routes, will avail itself of the values that the others have to offer. It is our intention to develop a close relation to the State Board of Health, because we have not yet even begun to realize the extent to which animal diseases affect human health. We know that many serious human ailments are directly attributable to animal diseases, and the veterinarian must disrobe himself of his modesty sufficiently to carry to the world the message that human health depends on the success of his work just as much as it depends on the doctors who treat, directly, diseases of human beings. Here again, I doubt if the medical doctors and the veterinary doctors have realized their potentially and close relationship. By closer contact with the Extension Service, and by having the Extension Service take up your fight to a greater extent than it ever has, we expect to carry into every farm home a broader knowledge of

Extemporaneous address delivered before the Maryland State Veterinary Medical Association, College Park, Md., June 21, 1944.

animal disease, which, ultimately, will make the farmer more conscious of the value of your services, and which will make him realize that he will benefit greatly if he uses your service to prevent rather than to cure disease.

Then another kind of public campaign that we must carry on is one which should reach into the homes of the people in the big cities and towns, in order to make them conscious of the worthwhileness, though unseen, of the services that you render. They should understand more fully the extent to which their health depends upon how successfully you do your jobs. As an integral part of such a plan as I am outlining, we shall develop a program of research, by which only can we make fundamental progress. We know something about some animal diseases. We know all about no animal disease, and about some diseases we know little, or nothing. Furthermore, we do not know what diseases animals may have, as yet unrecognized, which may be affecting human health far beyond any knowledge that we now have. Through research we shall try to learn, and will learn, about these things, and then, through our field organization, through you, the veterinarians, helped by the Extension Service, we shall carry this knowledge to the people. And with all this, we shall not relent one iota in our present control program. It will be continued as a part of the broader plan. If every veterinarian in this state association will make up his mind to be a crusader for and in his own profession, and those of us who know how valuable are the services that he renders will become his apostles, we shall establish in this state a program, the benefits of which will be so far-reaching to our people, generally, and will be so much appreciated, that it will win for the Livestock Sanitary Service a "place in the sun" among the people it serves. It will be looked upon as a necessary safeguard for the economic and health interests of their daily lives, and will set an example of a job so well done that every other state, eventually, will follow the banner that you have raised.

I salute you and your work, and ask only that you have the same confidence in yourselves that I have in you as to your place in the state's economic and social life. Only through a program such as I have here outlined will the veterinary profession ever

win for itself, in our state and national economic and health programs, the place that it deserves.

New Film on Cleanliness and Quality of Milk

Announcement has been made of a new sound motion picture in color, "Sentinels of Milk," edited and directed by Dr. C. S. Bryan, Division of Veterinary Science, Dr. W. L. Mallman, Department of Bacteriology and Public Health, and Dr. G. M. Trout, Department of Dairy Husbandry, all of Michigan State College, and Dr. F. R. Towne and Mr. G. R. Turney, of the Department of Health, Lansing, Mich. It presents a step-by-step pictorial review of the production, processing, and distribution of milk under modern, sanitary conditions and is of special interest to dairymen, milk processors, health department workers, school teachers, and lay audiences for the promotion of milk sanitation.

The film is 16 mm. and requires twenty minutes for showing. It was produced by Capital Film Service, East Lansing, Mich. Copies are available on a rental basis of \$5.00 per day which includes two free days allowed for transit. The picture is also priced at \$125.00 per copy for those who wish to add it to their film libraries.



Every day 340,000 gallons of milk from America's dairy farms go into the preparation of the favorite dairy food for the GI Joes on foreign soil. That represents the total production from about 135,000 cows.

If all of the milk used each year making ice cream for America's fighters abroad were put in quart bottles it would make a row of bottles nearly 30,000 miles long. This, states the National Dairy Council, is a part of the contribution of America's dairy industry to the health, stamina and morale of her fighters.

Durango Root (*Datisca glomerata*) Poisoning of Range Stock

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IN JULY, 1944, two large bulls, two 2-year-old steers and a yearling were found dead on a ranch near Bridgeport, Mariposa County, California. Mr. Dale Campbell of the Merced County farm advisor's office was called to investigate the loss. He found the dead animals were within 400 to 500 yards of each other and in addition several other head of stock in the field had severe diarrhea. No stock losses had been encountered in the field in previous years but adjustment of fencing along a highway had enclosed two acres of additional land that spring. On these two acres, considerable quantities of durango root were found growing vigorously along a wet creek bottom. The plant was not found in the same creek within the old fence line. The stock had fed mostly on the upper portion of the plant biting it off about two feet above the ground, and eating all the leaves and the upper portion of the stem. Evidence indicated that the cattle did not commence grazing the durango root until they had depleted the natural dry forage resources within the field. The plant is not listed among toxic species but Pammel¹ mentioned that Indians had used it to stun fish.

Jepson² lists durango root (*Datisca glomerata* Brew. and Wats.) (see fig. 1) as the only species of *Datisceae* occurring in California and states that it is native of the dry stream beds and washes of the Coast Ranges, Sierra Nevadas, Southern California, and Mexico, at elevations ranging from 150 to 5,000 feet. Robbins, Bellue, and Ball³ describe it as follows: "It is a stout, erect, perennial herb, 2 1/2 to 8 feet tall. The leaves are alternate, 5 to 6 inches long, divided, and more or less toothed. The flowers are in clusters in the axils of leafy branches. Pistillate and staminate flowers occur on different individuals. There is no corolla in either type flower. In pistillate flowers, the calyx is about 1/3 inch long, tubular, somewhat 3-angled and 3-toothed; the ovary is inferior, 1-celled,

and the styles 3. Sometimes there are a few stamens in pistillate flowers. In staminate flowers the calyx is but 1/12 inch long, subtending an indefinite number of stamens. The fruit is a capsule, which opens at the apex between the styles. The seed is oblong, with a collar-like scar off center at one end. The surface has characteristic rows of somewhat squarish pits. The color is yellowish-brown."

EXPERIMENTAL PROCEDURE

Feeding tests for toxicity were made upon both cattle and sheep. In preliminary tests with heifers, we were unable to induce the animals to eat the green plant material. The test animals differed from range livestock in that they had been subsisting upon a diet of good alfalfa hay instead of the low quality dry forage occurring upon the range at this time of year. A bountiful supply of green, luxuriant, pistillate plants were then collected and spread upon a large canvas to dry. In drying, most of the capsules opened and the seeds shattered to the canvas where they were later recovered. Weight loss of the plants in drying was 70.7 per cent of the green material. The stems constituted 32.5 per cent, the leaves 29.3 per cent, the mostly emptied seed capsules 24.0 per cent and the seeds 14.2 per cent by weight of the dried plants. The dry leaves and capsules were mixed and used in the following feeding tests except where otherwise stated.

Case 1, Long-Yearling Heifer 298 at the San Joaquin Experimental Range.—July 31:—fed 60 Gm. mixed with about 3 lb. of fine alfalfa hay. Diarrhea resulted the following day, and the animal was gaunt and depressed but was back to normal on the third day.

August 29, 8:30 a. m.:—fed 250 Gm. mixed with about 3 lb. of fine alfalfa hay and all was consumed. This was repeated at 1:30 p. m., but only a few mouthfuls of the mixture were eaten even though the animal was hungry and it was left before her until 6:00 p. m. She was then turned to water and drank heavily.

August 30, 9:00—9:30 a. m.:—animal lying in shade, nose dry, respiration normal, and temperature 100 F. She staggered on rising and was so weak in the hind quarters that only a few steps were taken before she would have to lie down again. There was slight bloating and slobbering at the mouth. After moving from the shade into the sun, her respiration

¹From the Division of Animal Husbandry, College of Agriculture, University of California, Davis.

rate increased rapidly reaching 81 per minute with marked depression.

10:30 a. m.:—lying quietly with nose resting on ground, and at 10:40 a. m. the animal died without movement other than one or two gasps.

1:00 p. m.:—postmortem examination. Heart had stopped in diastole; the rumen and reticulum mucosae were slightly congested; the

with a double handful of ground grain mixture and alfalfa hay leaves.

September 12, 8:00 a. m.:—The animal had not eaten all of the material, and showed diarrhea. During the next two days the diarrhea disappeared and the animal was kept without feed.

September 15:—given 75 Gm. in the grain mixture. Despite lack of other feed, the ma-



Fig. 1—Durango root showing characteristic growth.

—U. S. Forest Service Photo

omasum, abomasum, and duodenum mucosae were more severely congested; the large intestine was normal; and a few small hemorrhages were present in the peritoneum, pleura, and muscular tissue.

Case 2, Ram Lamb at the University Farm.—September 9, 9:00 a. m.:—fed 10 Gm. of leaves in alfalfa hay leaves with no observable ill effect.

September 11, 3:45 p. m.:—fed 60 Gm. mixed

material was consumed very slowly and diarrhea again developed on September 19. The animal was then taken off the experiment, given normal feed, and the diarrhea stopped.

Case 3, Wether Lamb.—September 9, 9:00 a. m.:—fed 20 Gm. of leaves in alfalfa hay leaves, with no observable effects.

September 11, 3:45 p. m.:—fed 40 Gm. in grain mixture and alfalfa leaves.

September 12, 8:00 a. m.:—The animal had

not eaten all of the material but showed marked diarrhea with liquid feces.

September 15:—The animal was normal and hungry. It was fed 50 Gm. of durango root seed in the grain mixture and all was consumed.

September 16:—Marked diarrhea had developed and the animal was quite gaunt, depressed, and had no appetite for good alfalfa hay. This continued through the following several days.

September 20:—The animal was returning to normal and was removed from experiment.

Case 4, Heifer 334 at the University Farm.—

September 16:—This animal was fed 150 Gm. in alfalfa hay leaves, but great difficulty was experienced in getting it consumed.

September 18:—The animal had eaten slightly over half of the mixture and had developed a watery diarrhea. The remainder was removed and 200 Gm. of durango root seed was mixed with about 2 lb. of the grain mixture. Although hungry, she smelled the mixture but refused to eat. It remained without any being consumed over the next three days during which time hay was fed at the rate of 2 lb. daily, and the bowel movements returned to normal.

September 22, 10:30 a. m.:—A 300-Gm. mixture of durango root leaves, seed capsules and some seeds was mixed with a little water and ground to a fine paste in a meat grinder. The ground material was mixed with a gallon of water and placed in the rumen through a stomach tube, about 25 Gm. being lost in the procedure.

3:30 p. m.:—The animal was depressed and refused to eat good alfalfa hay. The respiration rate in the sunshine on a warm day was 75 per minute, temperature 104.6 F., and the nose dry. She lay down and rested nose on ground after temperature had been taken, showing evidence of marked depression.

4:45 p. m.:—The animal was found dead where she had lain down at 3:30 p. m. Post-mortem examination made immediately: Viscera normal except gastrointestinal tract; omasum slightly congested around orifice to abomasum; entire abomasum mucosa uniformly congested to a moderate degree; duodenum mucosa markedly congested, but there were no hemorrhages; this was reduced in the jejunum and the ileum was practically normal. The heart had stopped in diastole.

Case 5, Stag Lamb.—September 23:—This animal had been kept away from feed for two days, and at 8:30 a. m. it was fed 100 Gm. of the mixture fed to heifer 334 in alfalfa hay leaves. The plant is very unpalatable to sheep and after a few mouthfuls consumption stopped.

September 24:—It had only eaten about 1/4 of the dosage, but had a watery diarrhea which continued for three days. No more of the plant would be consumed and the experiment was stopped.

RESULTS

The data show the durango root, including leaves, seeds, and seed capsules, definitely toxic. No stems were fed because they are very coarse and hard in the dried state. The feeding of sublethal doses to sheep and cattle resulted in diarrhea, loss of appetite, and general depression. The great difficulty encountered in inducing sheep to eat the plant is evidence of its low palatability. It appears doubtful if sheep would consume lethal amounts of the plant under natural range conditions. The relatively small intake of 250 to 275 Gm. of dry leaves and seed capsules proved to be lethal to a 21-month-old heifer (weight about 750 lb.) and a heifer calf (weight 400 lb.). The experiments with cattle indicate that an animal suffering from a sublethal dose would not likely eat any more of the plant. While the autopsies of the 2 heifers given lethal doses showed severe gastrointestinal irritation this was probably not the cause of the fatalities. Death probably resulted from some toxic substance in the plant causing systemic effects which acted upon nerve centers. This toxic substance had a depressing effect rather than an exciting effect upon the animals.

In spite of the high toxicity, it is very doubtful if durango root has been the cause of any great number of cattle losses annually or it would have been discovered earlier. It has, undoubtedly, been one cause of undiagnosed losses among cattle in the Sierra foothills.

The authors wish to express appreciation to Dr. A. S. Robertson, Madera County veterinarian, for performing the autopsy on heifer 298 (case 1).

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- ²Jepson, W. L.: *Manual of the Flowering Plants of California*, Berkeley, 1925.
- ³Robbins, W. W., Bellue, Margaret K., and Ball, Walter S.: *Weeds of California*. California State Department of Agriculture, 1941.

"Your piece on 'Paul de Marat, Veterinary Surgeon,' in the May issue, is a little gem in our literary garden. Veterinary medicine can be too shallow and barren without a few sentimentalities and condiments," are reactions for which the JOURNAL says, thank you.

Canine Distemper Immunization

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FOR THE SAKE of brevity, the historical background of canine distemper immunization will be omitted on the premise that such information has been repeated many times and is well known. In this paper, an attempt will be made to appraise canine distemper immunization from the practitioner's viewpoint.

During the past two decades, research workers who have concerned themselves with the virus of Carré and the other pathogens associated with this virus have contributed much to enlighten the practitioner regarding these organisms and their effects in canine hosts. Their investigations concerning the various aspects involved in the prevention and treatment of canine distemper have been fostered by commercial laboratories. These concerns fully realize the necessity of supplying the demand for effective agents to control this disease. However, with the many products that have come from these sources there have also emerged theories that are extremes. As a consequence, practitioners have long been interested in, and are always alert to, any discussion pertaining to canine distemper immunization. Invariably, these discussions terminate with the rendering of many different fixed opinions based on experience in a particular locality. It is rare indeed that anyone cites cases wherein comparisons of two or more biological products have been employed under similar circumstances and for a sufficient length of time to warrant a sound conclusion.

In fairness to all concerned, this phase of investigation is not one for the practitioner, as he has neither the time, the money nor the facilities to carry on such a project. It follows, naturally, that it behooves the commercial interests to promote the use of their products in the most practical manner possible. Thus, of necessity, practitioners must draw their own conclusions as to what are the best agents to employ in preventing and treating canine distemper.

In the light of these circumstances, it is

Read before the eighty-first annual meeting of the American Veterinary Medical Association, Chicago, Aug. 22-24, 1944.

my personal opinion that a review of the report¹ of the Special Committee on Diseases of Small Animals, presented at the 1943 meeting of this association, is in order. As matters stand, the section of the report, which was rejected, dealing with canine distemper biological products, and their evaluation, places the practitioner in a most vulnerable position. A project, such as was proposed, might very well be considered a part of our postwar program. After all, it is the practitioner who must meet the public and its complaints regarding prophylaxis; it is the practitioner who pays for the product used; it is he who charges off the losses when things do not go well with the pet that is being or has been immunized, and it is he and his clientele who are entitled to know what agents serve their best interest in protecting dogs against the virus of Carré. It is fully realized that the blame for incomplete immunization does not always rest with the product used or the manufacturer who supplied it.

THE VETERINARIAN'S RESPONSIBILITY

The immediate problem confronting the veterinarian when a client presents his pet for immunization against distemper involves more than giving the dog a "shot," or "series of shots." A solution to this sometimes vexing problem involves taking a careful history of the patient, making a physical examination, and employing such laboratory tests as are indicated.

History.—Careful inquiry should be made relative to the patient's care, diet, pedigree, habitat, habits, previous illness, and recent exposure to other dogs. Inquiry should also reveal if the animal is medicated for any reason, and, if recently acquired, from what source.

Granted that the general care of the dog has been satisfactory, let us briefly consider the implications if we are not satisfied with the answers given to the questions put to the client about his dog.

To the owner, the pup may appear to be in a good state of nutrition. To ward off

trouble, make sure that good quality protein, in sufficient quantity, has been fed so that resistance will not be impaired when immunization is attempted. Do not be content with the statement that the dog is given vitamins routinely. An editorial² in the *Journal of the American Medical Association* states: "Without more than enough protein to maintain nitrogenous equilibrium, antimicrobial vitamins are immunologically ineffective. . . Experiments during the past twenty years confirm this statement." Naturally, the other essential factors in the diet should be given consideration.

Due to the application of odd twists of the breeder's mind, purebred dogs often are of a type that does not lend itself well to immunization. The outward points of a potential prize winner may often lead to disappointment if due care is not exercised in evaluating the inbreeding weaknesses and potential lack of resistance. Likewise, young dogs imported to the city from rural surroundings do not seem to have the natural resistance that is often acquired in city-raised dogs. Even when serum alone is administered to such young animals, they may contract distemper. Natural exposures seem to carry more potentialities for trouble to serum-protected dogs than do experimental virus inoculations.

Quite frequently, an owner will present a pet with full knowledge that the dog has been in contact with a diseased dog and will request, without mentioning the exposure, that the dog be immunized. Care must always be exercised to elicit such information so as to avoid possible embarrassment when the so-called "break" may follow. These cases always reflect on the judgment of the veterinarian. Pets that have been recently medicated for any reason, with or without veterinary supervision, are always to be viewed with suspicion until they are proved to be in a state of health that would classify them as good risks for immunization.

Physical Examinations.—This feature of the immunizing process should be in sufficient detail to supply the examiner with information to permit him to conclude that the patient should be given passive or active immunization. In no instance is one justified in taking a chance that the patient will probably get by even if he is not

physically fit. To do so is to invite trouble.

Fecal Examinations.—An examination of a fecal specimen should be routine practice. Dogs harboring intestinal parasites, particularly blood-suckers, should be treated for the parasitism. In the meantime, give serum only and prescribe a diet that will overcome any accompanying anemia.

Blood Examinations.—In many cases, especially when attempting to immunize valuable dogs, it is good policy to be fortified with a hemogram. Oftentimes, the information supplied by a blood count justifies the conclusion that the subject is not a good risk. These cases bear close watching and, more often than not, the owner is appreciative of the care taken.

After appraising the history and the general and laboratory examinations, one should explain the findings to the owner as fully as is expedient. If passive or active immunizing agents are to be administered, one should mention which is being given and why. In all probability, the selection of the product to be employed will hinge on one's experience with it. However, this judgment should be based on one's own practice and vicinity. The biological product used may not have been as satisfactory in the hands of others. We are all passing through a period of trial and error in this work.

All of these points, bearing on our responsibility to the dog-owner, add up to forestalling pitfalls; helping to eliminate the creation of antivaccinationists; fostering a clientele that has confidence in us; and, above all, helping to build a good reputation for the veterinary profession.

IMMUNIZING LIMITATIONS

Each of us has opinions based on experience with the use of one or several immunizing agents. Some of us have run the gamut of the several agents offered for immunizing dogs against distemper and have attempted to keep pace with the new developments in immunology. No one with much experience can say his path has been a bed of roses. The research worker is confronted with his investigational problems, some of which are far from being solved; the producer has his manufacturing and distribution tribulations; and the practitioner has to sell the idea of prevention to a not-too-understanding public, compete with lay administration of some of these

products; buffer the antivaccinationist; and reconvert those who have had bad experiences previously in attempting to have their dogs immunized. Fortunately, the latter represent but a small segment of the dog-owning public. My thought in presenting these views is that we should be cautious in our dealing with the public and we should not imply that a dog presumably immunized against the virus of Carré will henceforth have a lifetime immunity. To avoid stating that such may not be the case opens the way for challenge and never-ending criticism. Truth always pays dividends; sincerity begets good will.

It is not my purpose to discuss the several immunizing products that are employed daily by veterinarians in attempting to combat the virus of Carré and its allies. Suffice to say that much good has come from past investigations and let us hope that more intensive research will yield information that will place the virus of Carré and its kindred intruders under the thumb of the veterinarian. In the meantime, all that the practitioner can hope to do is to use to the best advantage those weapons which the scientists and the producers of biological products have distributed for combating this plague of dogdom. I assume that all of you know the various biological products that are at your disposal.

THE FOLLOW-UP

Should we consider the transaction closed when we have completed our immunization schedule and the client has paid his bill? In a sense, yes. However, it is always advisable to follow through for thirty days, six months, or even a year after the immunizing procedure has been completed. Surveying individual immunizing methods on this basis affords the practitioner a better-than-memory record and very often disproves many ideas that may have been entertained regarding the product or products used and the technique employed. Contrariwise, results may have been better than were anticipated. If such data were assembled, compiled, and presented on a statistical basis, much valuable information would be available to the practitioner, which would be particularly useful to the younger men in our profession.

In the event that live or modified virus is used, a close contact should be kept with the client so that untoward reaction may

be promptly treated. Too often, owners are inclined to procrastinate, with the consequence that the virus-treated patient may be showing evidence of secondary infection when presented for examination. To let matters reach this point reflects somewhat on the veterinarian for not keeping in closer touch during the period of a possible reaction. Rarely is one justified in attempting to place the blame for "breaks" on some other disease. One should face the facts as they are and reiterate what has or should have been stated before the immunization was attempted, regarding reactions in certain patients over which no one seems to have absolute control. It is these cases that make for misunderstandings. Perhaps the best course to follow, in such a case, is to do all that is possible to appease the client and charge the lowest possible fee commensurate with the service rendered. Usually, there is no objection to this arrangement and where the outcome is not a fatality the goodwill of the owner is retained. Any other arrangement works to the disadvantage of the profession and the practitioner. If the veterinarian involved shows the slightest indifference in the performance of his obligation during such a crisis, he discourages resort to all immunization practices. To create an antivaccinationist never helps to sell your services.

RECORDS

It is a wise practitioner who takes time to keep a permanent record of his performance in every case. This is especially true in cases where an attempt is being made to immunize a patient. Sometimes the procedure is interrupted, due to the client moving to a new territory. These persons, or better still the veterinarian to whom you refer them to complete the immunizing program, should be supplied with data sufficiently complete so that there will be no hitch in completing this program. Dates when certain treatments were given readily slip the memory and it is always well to create that feeling of confidence in the owner that you do not use slipshod methods and guesswork in your practice. Many times the elimination of uncertainties when work was done, effects the prompt collection of your bill. If a "break" occurs, you are in a position to quickly reorient yourself relative to the things that have gone before. Lastly, you have basic information accumu-

lated that serves to support your opinion when distemper prophylaxis is discussed, or a request is made to supply data that would contribute in analyzing the status of distemper prophylaxis on a state or national basis.

QUARANTINE

When virus or modified virus is administered to a dog, it is wise to isolate the patient from susceptible individuals, both in the hospital and in home surroundings. Experience has taught that dogs recently inoculated with virus or modified virus are a source of infection to susceptible dogs, and the latter are not necessarily to be classified as puppies. Safety first is a good adage to keep in mind when using virus in any form.

CONCLUSION

Undoubtedly, all commercial concerns marketing products used in connection with the immunization of dogs are alert to the fact that this is an era of progress. Consequently, they are searching for improved techniques and better products to combat the virus of Carré and associated pathogens. In turn, it is quite likely that future investigation of many of the newer things applicable to man may be the stepping stone to the control of diseases in dogs and other animals. Henceforth, let us strive individually and collectively to help make this old world of ours a better place in which to live, and to maintain our animals.

References:

- ¹Report of the Special Committee on Diseases of Small Animals. J.A.V.M.A., 103, (1943): 341-343.
- ²Editorial—Immunity and Protein Reserves, J.A.M.A., 120, (1942): 1309.

The Veterinary Record, official organ of the National Veterinary Medical Association of Great Britain and Ireland, reports that the ratio of registered to unregistered veterinary practitioners in England is about 2.5 to 1, counting only those whose practice is their sole source of livelihood. Whether the situation is worse or better in the United States is not known but is worth investigating.

Twenty-five per cent more hogs could be marketed at a profit if swine raisers would all follow modern disease prevention measures.—*Norden News*, May-June, 1945.

Veterinary Inspectors Handle Huge Flow of Livestock

In supervising the interstate transportation of livestock to prevent the spread of diseases, veterinary inspectors of the U. S. Bureau of Animal Industry, last year, safeguarded the health of more than 23,412,083 cattle, 28,150,427 sheep, and 45,152,111 swine. This number considerably exceeded that of any previous year. Most of the inspections were conducted at the 48 principal stockyards of the country. A recent report by Dr. A. W. Miller, chief of the Bureau, shows the extent of the veterinary duties performed in handling the flow of livestock.

Cattle and sheep dipped to control injurious parasites numbered 290,615. In addition, 438,166 swine were immunized against cholera, preparatory to their distribution for feeding or breeding purposes.

Veterinary inspectors also supervised the cleaning and disinfection of large numbers of railroad cars and trucks that had carried animals affected with disease. They performed many other duties including the segregation and control of cattle that had reacted to tests for brucellosis and tuberculosis. The inspectors also examined all ruminants and swine for foot-and-mouth disease, no case of which was found.



—Successful Farming

This China hog wears a bamboo muzzle; no ring in the nose for him.

Report on Infectious Equine Encephalomyelitis in the United States in 1944

Abstracted from a report (dated May 19, 1945) by A. W. Miller, Chief, United States Bureau of Animal Industry

WITH THIS report there will have been completed a ten-year period beginning in 1935, in which the gathering and reporting of statistical data on infectious equine encephalomyelitis has been carried on by the Bureau. From the following figures on cases reported annually from 1935 to 1944, inclusive, it will be noted that the 1944 epizootic was of only moderate proportions: 23,512; 3,929; 173,889; 184,662; 8,008; 16,941; 36,872; 4,939; 4,768; 19,590. The 19,590 cases reported for 1944 occurred in 33 states. Data on incidence and mortality are summarized in table 1. The figures in the column headed "horses and mules in affected areas" represent the total number of such animals in the affected counties of each state.

Figure 1 shows where the disease occurred during the so-called pre-epizootic, epizootic, and post-epizootic periods of the year. Figure 2 illustrates the degree of incidence of the disease by counties.

The estimated number of horses and mules vaccinated in 1944 is 800,000, or about one-third higher than the 1943 figure. Reports, including some estimates, of two-dose vaccinations of 261,535 animals were received. Among 242,650 animals so vaccinated in counties where the disease occurred, 53 cases and 26 deaths were reported. From these figures, the rate of incidence in vaccinated animals is calculated to be slightly more than 0.2 per thousand as compared with an incidence of 2.9 per

(See figure 1 on opposite page.)

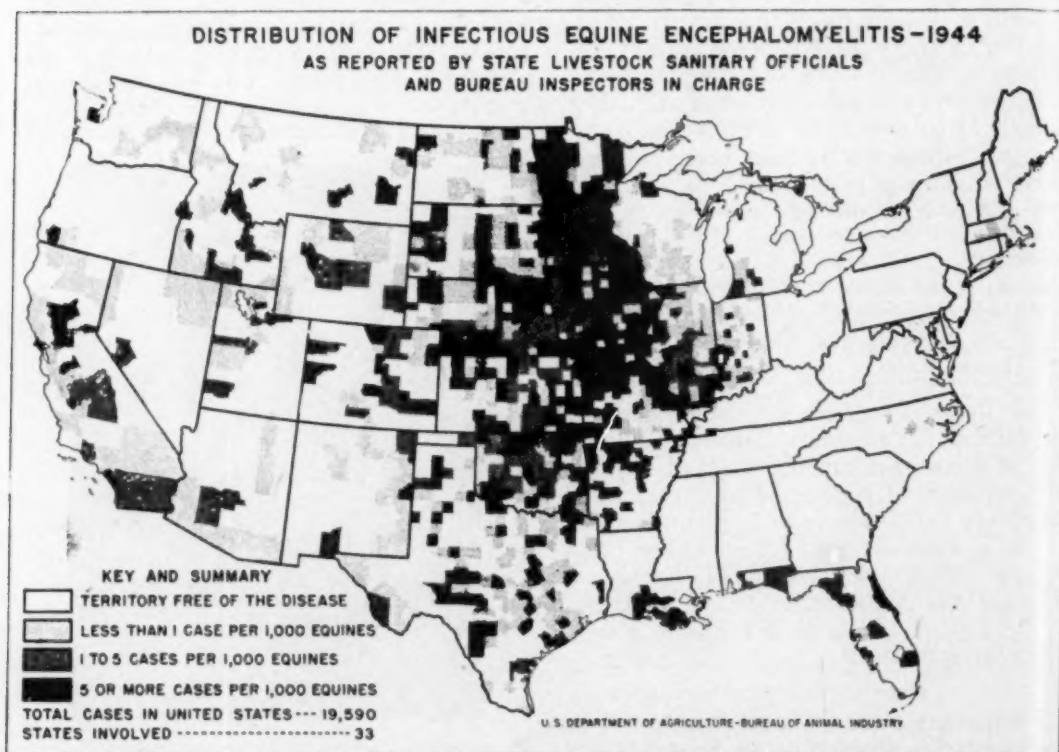


FIGURE 2-DISTRIBUTION AND DEGREE OF INCIDENCE OF INFECTIOUS EQUINE ENCEPHALOMYELITIS, 1944



PRE-EPIZOOTIC PERIOD
CASES REPORTED FOR:

JANUARY-----	2
FEBRUARY-----	6
MARCH-----	10
APRIL-----	44
MAY-----	150
TOTAL	212



EPIZOOTIC PERIOD
CASES REPORTED FOR:

JUNE-----	332
JULY-----	1,065
AUGUST-----	3,624
SEPTEMBER-----	6,596
OCTOBER-----	4,121
TOTAL	15,738



POST-EPIZOOTIC PERIOD
CASES REPORTED FOR:

NOVEMBER----	256
DECEMBER-----	5
TOTAL	261

Fig. 1—Distribution of reported cases of equine encephalomyelitis according to periods during 1944.
Each dot represents a county in which one or more cases occurred during the period.

Table 1. Infectious Equine Encephalomyelitis
Summary of Reports on Incidence and Mortality by States, 1944

State and division	Horses and mules in affected areas	Animals affected	Cases per 1,000 horses and mules	Total deaths	Deaths per 100 affected animals	Month of report of—	
						First case	Last case
Maine	—	0	—	—	—	—	—
New Hampshire	801	1	1.2	1	100	June	June
Vermont	—	0	—	—	—	—	—
Massachusetts	4,811	2	0.4	1	50	June	June
Rhode Island	—	0	—	—	—	—	—
Connecticut	—	0	—	—	—	—	—
New England	5,612	3	0.5	2	66	June	June
New York	—	0	—	—	—	—	—
New Jersey	348	1	2.9	1	100	Sept.	Sept.
Pennsylvania	—	0	—	—	—	—	—
Middle Atlantic	348	1	2.9	1	100	Sept.	Sept.
Ohio	—	0	—	—	—	—	—
Indiana	136,754	144	1.0	63	43	March	Dec.
Illinois	395,030	947	2.4	283	29	April	Nov.
Michigan	53,573	92	1.7	40	43	July	October
Wisconsin	192,096	100	0.5	31	31	June	October
East North Central	777,453	1,283	1.6	417	32	March	Dec.
Minnesota	530,846	1,470	2.8	307	20	April	Nov.
Iowa	640,153	2,121	3.3	460	21	March	Dec.
Missouri	554,643	4,160	7.5	857	20	July	October
North Dakota	167,948	126	0.7	43	34	June	Sept.
South Dakota	240,941	268	1.1	69	25	May	October
Nebraska	436,150	1,571	3.6	339	21	Feb.	Nov.
Kansas	363,289	1,157	3.2	211	18	May	Nov.
West North Central	2,933,970	10,873	3.7	2,286	21	Feb.	Dec.
Delaware	—	0	—	—	—	—	—
Maryland	—	0	—	—	—	—	—
Virginia	7,984	4	0.5	2	50	July	October
West Virginia	—	0	—	—	—	—	—
North Carolina	29,490	5	0.2	4	80	April	June
South Carolina	—	0	—	—	—	—	—
Georgia	—	0	—	—	—	—	—
Florida	22,935	78	3.4	73	93	April	October
South Atlantic	60,409	87	1.4	79	90	April	October
Kentucky	27,751	23	0.8	16	69	Sept.	Sept.
Tennessee	—	0	—	—	—	—	—
Alabama	—	0	—	—	—	—	—
Mississippi	—	0	—	—	—	—	—
East South Central	27,751	23	0.8	16	69	Sept.	Sept.
Arkansas (1)	—	4,000	—	1,000	—	Sept.	October
Louisiana	85,639	254	3.0	152	59	June	October
Oklahoma	404,481	1,401	3.5	299	21	Jan.	Nov.
Texas	513,421	778	1.5	248	31	April	Nov.
West South Central	1,003,541	6,433	2.4	1,699	29	Jan.	Nov.
Montana	53,987	42	0.8	9	21	April	Sept.
Idaho	101,261	117	1.1	44	37	May	Sept.
Wyoming	77,872	61	0.8	18	29	June	Sept.
Colorado	103,544	255	2.5	68	26	May	October
New Mexico	51,107	71	1.4	26	36	May	October
Arizona	36,472	46	1.3	16	34	June	October
Utah	37,903	62	1.6	26	41	June	October
Nevada	15,446	6	0.4	1	16	August	August
Mountain	477,592	660	1.4	208	31	April	October
Washington	39,278	12	0.3	5	41	May	July
Oregon	4,803	4	0.8	1	25	August	August
California	134,360	211	1.6	65	30	April	Nov.
Pacific	178,441	227	1.3	71	31	April	Nov.
Total or Average	5,465,117	19,590	2.9	4,779	24	Jan.	Dec.

(1) In this State, data given were estimated and calculations are excluded.

thousand in unvaccinated animals. Thus it is seen that the incidence in the latter group was more than 14 times greater than that in the former.

As in past years, the importance of stressing the determination of the immunologic types of virus was again made clear during the 1944 outbreak. Eastern type virus was isolated from the brain of a horse from Missouri whose geographical position strongly suggested that western virus was operating, although that type has not yet been identified from that state. Eastern type virus, as was to be expected, was recovered from Louisiana. The same type was also identified from specimens from Cuba. Sulkin reported finding a new host and possible vector, the chicken mite (*Dermanyssus gallinae*), for western type virus.

Penicillin in Empyemas

The somewhat phenomenal cures of post-pneumonic empyema in man described in the May issue of *Annals of Surgery*, by an officer of the Medical Corps of the Army, strongly suggests its use for similar conditions met routinely in veterinary practice. Success was achieved with and without the repeated thoracenteses in general use. The article turns the mind to the fatal seropurulent empyema of the horse—hydrothorax—which follows in the wake of pleuropneumonia, and pyometra of the bitch, cow, and mare, which requires either surgical or prolonged local treatment leading only to permanent sterility.

Now that penicillin is coming into general use in animals, the study of indications, methods of application, and dosage is in order. The article on its use in streptococcal bovine mastitis in this issue of the JOURNAL, and the work of Klein and coworkers, on the staphylococcal form of that infection, published in the *American Journal of Veterinary Research* (Jan., 1945), are insights that penicillin occupies a place of first importance. But until the big laboratory—the field of practice—hands down its verdict, one has but to wait and watch the developments, hoping that the wonder drug will not default in veterinary medicine.

Too few farmers are aware that food is as essential for plants as for animals.—The word “fertilizer” should be changed to “plant food.”—From a WLS Broadcast.

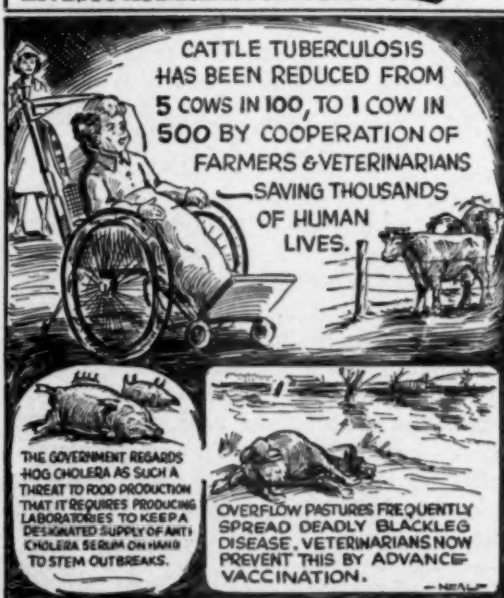
Penicillin by the Mouth

The so-called “enteric capsule,” long used in veterinary medicine for drugs destroyed by the action of the acidity of the stomach, is announced as an important advance in penicillin therapy. The “discovery” is credited to chemists of the American Cyanamid & Chemical Company. Sodium or calcium salts of the drug suspended in oil are given in a capsule processed to bypass the stomach and dissolve in the alkaline medium of the intestine, whence, the reports say, adequate concentration in the blood can be obtained. In veterinary medicine, the advantage of internal over parenteral administration of penicillin is not discounted, but the claim that the method is “new” needs revision.

Now that Dogs for Defense is no longer acting as a direct procurement agency for canine recruits for the various armed forces, it may share the fate of other epoch-making organizations in the past and fade from the memories of a notoriously fickle and forgetful public.—From *American Kennel Gazette*.

DDT is called “sleeping powder” by the Arabs, because treatments relieved them of lice. Then they got a good night's rest.

LIVESTOCK HEALTH ODDITIES



—American Foundation of Animal Health

SURGERY & OBSTETRICS

AND PROBLEMS OF BREEDING

Dirofilaria immitis in the Eye and in an Interdigital Cyst

CAPTAIN GERRY B. SCHNELLE, V.C., AND MAJOR T. C. JONES, V.C.

Front Royal, Virginia

Case 1.—A 4-year-old Irish Setter was admitted to the dog dispensary on Aug. 25, 1943, because of a diffuse opacity of the right eye. Upon close examination a large, white worm was detected moving about within the anterior chamber.

The subject was a war dog which came to the Front Royal War Dog Reception and Training Center from Lansdowne, Pa., on March 6, 1943. After receiving basic training, it was sent to Tampa, Fla., on April 20, for duty with the Coast Guard. The dog was returned to Front Royal, August 15. Upon admission to the veterinary hospital, the dog was moderately thin with scaly dermatitis over most of the body. Some photophobia was present in association with diffuse cloudiness and early vascularization of the cornea. The pupil was much smaller than that of the opposite eye. The worm maintained a rapid whipping motion, and occasionally disappeared through the pupil into the posterior chamber.

Repeated examination of the blood failed to disclose microfilariae. A small sample of aqueous fluid was withdrawn under anesthesia and examined microscopically. Erythrocytes, leucocytes, and some tissue debris were present but no microfilariae were seen in a centrifuged sample of this fluid.

Atropine was instilled into the conjunctival sac, and twelve hours later the dog was fully anesthetized with pentothal sodium, intravenously. The accompanying color photograph (fig. 1) was taken on Kodachrome type B professional film, using one speed midjet flash bulb for illumina-

tion. The room was darkened and the "open shutter" method of exposure used.

Operation.—Pentothal sodium was administered, intravenously, to obtain complete anesthesia, and the eye was irrigated with a 1:5,000 solution of zephiran chloride. An incision 1 cm. in length was made in the



Fig. 2—Dog A378 upon release from the hospital. Case 1.

cornea adjacent and parallel to the dorsal limbus. A straight, sharp knife (Bard-Parker No. 11) was used. The parasite was grasped with an alligator forceps and withdrawn from the anterior chamber. No sutures were taken. Healing was rapid and complete within a few days, after which the patient was returned to duty (fig. 2). The dermatitis responded favorably after local application of an oily preparation and the feeding of a balanced diet.

The Parasite.—The parasite was a slender white worm measuring 12 cm. in length. After examination under a dissecting microscope, it was judged by us to be an immature male of the species *Dirofilaria im-*

From the Veterinary Station Hospital and Veterinary Research Laboratory, Front Royal Q. M. Depot, Virginia.

Dr. Schnelle has returned to his post at the Angell Memorial Hospital, Boston, Mass.



Fig. 1—*Dirofilaria immitis* in the anterior chamber of the eye of a dog. Case 1.
(Medial canthus, right.)

mitis. Railliet and Henry¹ have reported the presence of an adult female filaria in the anterior chamber of a dog's eye.

Case 2.—A 3-year-old male Collie was admitted to the veterinary station hospital for the treatment of a small interdigital abscess on the left hind foot. The abscess was

for the lameness had been discovered. On February 14, an acute lameness developed in the left hind leg and the abscess was located.

Upon incising the infected area at its softest point, a live parasite emerged together with a quantity of flocculent, blood-

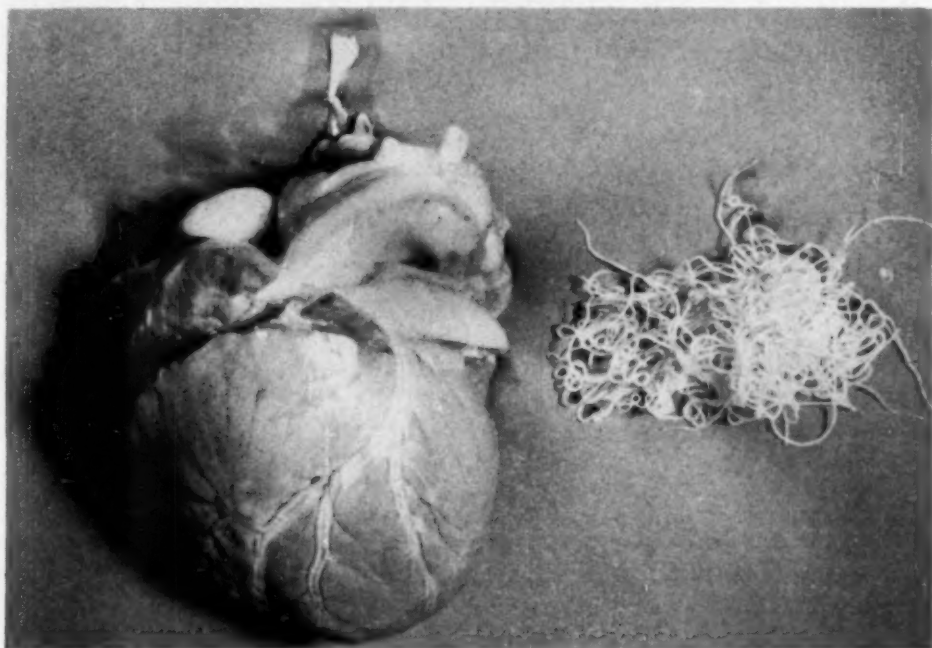


Fig. 3—Aneurysm of pulmonary artery caused by the large mass of adult *Dirofilaria immitis* (shown at right). Case 2.

between the second and third toes and had the appearance of an interdigital cyst which had become abscessed. These cysts are common on dogs, but this case apparently had an unusual cause, hence this report is believed to be of interest:

The dog originated in Chicago, and was trained at Fort Robinson, Neb. It saw service at Montgomery, Ala., from April until June, 1943, and at Moorhead City, N. Car., from June until October of the same year. The dog arrived at Front Royal in the latter part of October, at which time examination of the blood failed to reveal microfilariae.

The patient had been brought to the canine dispensary several times during the three weeks preceding Feb. 14, 1944, because of a lameness which the trainer thought involved all four feet. No cause

tinged pus. The abscess had a cystlike structure and it was thought that a non-inflammatory cyst had existed at this position for some time previous to abscess formation.

The parasite measured 8 cm. in length and was quite slender. Examination revealed it to be an immature female *D. immitis*.

Microscopic examination revealed many microfilariae in the peripheral circulation. The dog was destroyed and a necropsy performed. The right atrium and right ventricle contained a large mass of *D. immitis*. Many were also found in the pulmonary arteries well into the lungs. A large mass of filariae caused a large dilatation of the pulmonary artery (fig. 3). The diaphragmatic lobe of each lung was intensely engorged in a sharply demarcated area in its posterior half. This is a common finding in dogs with heavy heartworm infestation. No other gross lesions were noted.

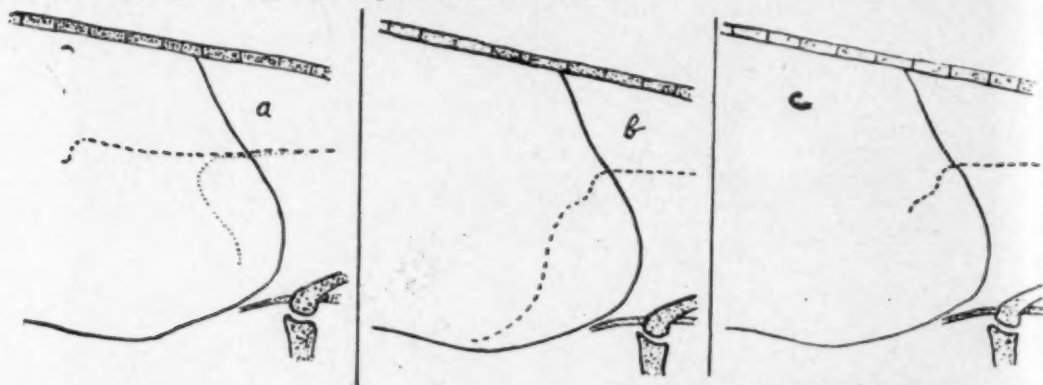
¹Hutyra, Marek, and Manninger: Special Pathology and Therapeutics of the Diseases of Domestic Animals, 4th ed., vol. 3, (1938): 154.

Intubation of the Abomasum in Sheep

When the stomach tube is passed in a ruminant, it normally enters the rumen and reticulum. No success has been previously reported in introducing tubes into other compartments of the stomach of these animals. It has been found that liquids given by mouth pass directly to the abomasum in some sheep. According to a report in *The*

groove, probably due to repeated passage of the tube.

The tube always offered considerable resistance to withdrawal, once the tip had entered the abomasum, but when water was given the resistance disappeared and the tube could be withdrawn freely. No resistance was noted in withdrawing the tube from the rumen or reticulum at any time.



—From *The Australian Veterinary Journal*

Fig. 1—(a) Tube in rumen (broken line), or reticulum (dotted line); (b) Tube in abomasum. The double curve immediately beyond the diaphragm is characteristic and probably represents the lie of the tube in the esophageal and omasal grooves. (c) Position from which tube may be repressed.

Australian Veterinary Journal (Feb. 1945), use was made of this behavior to introduce tubes into the abomasum.

The animal was restrained in normal standing position. The tube used was of light rubber and no more than 1/4 inch in external diameter. The tube, wetted with water or saline, was introduced into the nose until the tip was just oral to the cardiac orifice—approximately 24 inches from the tip of the nose. The tube was then filled with a suspension of barium sulfate in water, a plug being inserted in the free end to retain the suspension in it, and the course taken by the tube was followed fluoroscopically (fig. 1). Water was siphoned into the mouth from a height of 3 to 18 inches above the animal's head, and the tube was passed in gently as the animal swallowed, the tip of the tube being carried along by the swallowing movement.

Time and patience were sometimes needed to get the tube down where desired, because it might enter the rumen, the reticulum, the omasum, or the abomasum. It became increasingly difficult to pass the tube on successive trials, and one sheep examined at postmortem showed marked inflammation in the region of the omasal

The procedure works better on some sheep than on others, and copper sulfate in the water may facilitate passage in the difficult animals. The method can be applied to only a small proportion of sheep, and even in these is not always successful. Stomach contents can seldom be aspirated through this small tube, so the procedure has a very limited use.—[Watson and Jarrett: *Intubation of the Abomasum in Sheep*. *Aust. Vet. J.*, (Feb., 1945).]

Pelvic Fracture in Stilbestrol-Treated Cows

Stilbestrol implantations employed on quite a large scale in England were alleged to be responsible for numerous fractures of the pelvis in the treated cows and heifers. Seven such fractures, out of an unmentioned number, are reported by one author and 20 per cent of all animals so treated by another author. The mechanism of the accident from the long continued use of this synthetic estrogen is not explained, except that structural or chemical alteration of the bones and/or changes in their angular relations were suspected.—Abstract from *J. Endocrinol. in Exper. Sta. Rec.*, 92, (Feb. 1945): 259-260.

CLINICAL DATA

Clinical Notes

Pantothenic acid deficiency may produce a condition which resembles mange in pigs.

Lack of phosphorus may be a cause of abortions and still-births among range ewes in southern Idaho.

The literature on the sulfonamides and their mode of action is confusing and contradictory, says Dr. F. T. Baker, in *Illinois Monograph of Medical Science*.

The tube test for pullorum disease (at 1:25) is the most satisfactory test now in use, says L. D. Bushnell in *Poultry Science*. The stained antigen whole blood test is the least satisfactory.

Fowl that enter the laying house in poor flesh have a higher mortality than other pullets in the same flock, and the egg production is also somewhat lower.—*Poultry Science*, May, 1945.

Penicillin showed no action against the viruses of vaccinia, equine encephalomyelitis, and St. Louis encephalitis, *in vitro*, in trials made by Parker and Diefendorf of Lakeside Hospital, Cleveland, Ohio.—*From Biological Abstracts, Section C*, April, 1945.

Sulfamethazine in concentrations of 0.4 to 1.0 per cent in the feed will materially reduce death losses from cecal coccidiosis if fed before the fourth day of infection. It interferes with normal growth, and galvanized containers neutralize its action when a saturated solution is used as drinking water.—*From Poultry Science*, May, 1945.

Vaccination of pullets against pox is best accomplished when they are 8 to 12 weeks old.

Repeated small doses of plasma are more effective in controlling shock than one large injection.

Cocklebur plants are most poisonous to pigs just before the first true leaves appear, and pigs relish these tender shoots.

Inherited shortening of the long bones of turkeys in a mutant strain is reported by Asmundson in *Journal of Heredity*. However, he has succeeded in raising only 3 per cent of the "short" embryos.

Ulcers, similar in their gross and microscopic appearance to human gastric or peptic ulcers, are reported by Kernkamp in 2.4 per cent of 754 pig stomachs examined at autopsy. Half of the cases had only one ulcer, the others two or more, and most of them were found on the greater curvature of the stomach.

A vaccine which protects against Rocky Mountain spotted fever has been developed by the U. S. Public Health Service, and is now being produced commercially. There is also an antiserum. Mortality, which used to be 85 to 90 per cent, is now down to about 20 per cent.—*Science News Letter*.

A human case of ornithosis (psitticosis), contracted from pigeons by a middle aged pigeon fancier, yielded in seven and a half days to penicillin given in three divided doses at the rate of 10,000 units per day. In veterinary medicine, the interest in this case was the source of the infection.—*From Veterinary Student*.

Treatment of Bovine Mastitis with Penicillin

L. W. SLANETZ, Ph.D., AND F. E. ALLEN, D.V.M.

Durham, New Hampshire

SINCE penicillin has proved so effective in the treatment of certain human infections due to streptococci and staphylococci, it is natural that its therapeutic value for bovine mastitis be studied. Few reports have appeared, as yet, in the literature regarding the use of this drug for the treatment of mastitis. Kakavas¹ prepared some penicillin in his laboratory and studied its value for the treatment of mastitis. He reported, based on a limited number of cases, that sodium penicillin appeared to have promising therapeutic value in streptococcal and staphylococcal mastitis. Klein, Crisman, and Moor² used penicillin for the treatment of seven quarters infected with staphylococci and reported an apparent cure in only two of the quarters.

In a brief note published in the JOURNAL,³ the results are given of the treatment with penicillin of 46 cows for mastitis in an experiment conducted by the U. S. Bureau of Animal Industry, in coöperation with the University of Maryland. *Streptococcus agalactiae* was eliminated in 58.8 per cent of 76 infected quarters, other streptococci in 48.5 per cent of 19 quarters, and staphylococci in 60.0 per cent of five quarters. The filtrate used contained from 68 to 95 Oxford units of penicillin per cc. Bryan, Horwood, and Huffman⁴ found that infusion of penicillin (sodium salt) was relatively nonirritating to the mammary tissue even when 400,000 units were injected per quarter. Thirty-two cows were treated with one or more infusions of from 1,000 to 20,000 units, and all became free from chronic streptococcal mastitis. None of the cows treated had marked indurations of the udder. Intravenous administration of penicillin proved ineffective in the treatment of chronic *Str. agalactiae* mastitis.

This paper reports the highly successful results obtained to date in our studies on the therapeutic value of penicillin for the treatment of bovine mastitis.

Method of Administration.—For this study, the penicillin (sodium salt)* was

From the New Hampshire Agricultural Experiment Station, Durham.

prepared so that each 100 cc. contained 100,000 or 200,000 Oxford units. A 100-cc. dose was injected into the infected quarter via the teat canal. Cows were given either one, two, or four injections immediately after milking. Cows given more than one injection were treated at twelve-hour intervals. Both saline (0.85% NaCl) and distilled water were tested as diluents for the penicillin.

Clinical Data.—All cows treated were in one herd for which records of mastitis infection were available over a four-year period. During this period, milk samples were collected at three-month intervals from all cows in the herd and tested for mastitis by cultural tests and microscopic examination of incubated samples. The streptococci were identified as *Str. agalactiae* on the basis of growth on Edward's medium and selected biochemical tests. Cows were considered positive for staphylococcal mastitis when hemolytic staphylococci and leucocyte counts of 500,000 or more per cc. were continually present.

The period of infection in the cows treated ranged from three months to four years. Thirty-three cows with streptococcal mastitis (*Str. agalactiae*) in 59 quarters, and 8 cows with staphylococcal mastitis (hemolytic staphylococci) in 14 quarters were treated. Three of the cows in the treated group had *Str. agalactiae* infection for a period of approximately four years, 3 for two years, 3 for one year, 10 for six months, and 14 for three months. While none of the cows had severe, acute mastitis at the time of treatment, some were giving discolored or stringy milk. Some of the cows also showed considerable indurations of the udder.

Method of Determining Therapeutic Value of Penicillin.—The treated cows were considered cured when no mastitis streptococci or staphylococci could be detected in quarter samples examined by cultural tests and microscopic examination of incubated

*All of the penicillin used in this study was supplied through the courtesy of Lederle Laboratories, Pearl River, New York.

samples. All cows were tested at weekly intervals for four or five weeks after treatment.

RESULTS

Twelve cows with streptococcic mastitis (*Str. agalactiae*) infection in 19 quarters were treated with either one, two, or four injections of 100 cc. of solution containing

100,000 units per 100 cc., in two quarters; one quarter was cured, but one quarter remained infected. The infected quarter was retreated one week later and cured with one injection of 200,000 units. The other cow was given one injection of 100,000 units in all quarters for the first treatment; three quarters remained infected. The three infected quarters were retreated one week

TABLE 1—Protocols of Typical Streptococcic Mastitis Cases Treated with Penicillin
Treatment 1. Injection of 100,000 or 200,000 Oxford Units of Penicillin in 100 cc. of Sterile Saline or Distilled Water

COW	AGE IN YEARS	MONTHS OF LACTATION	PERIOD OF INFECTION	PENICILLIN (UNITS)	DATE 1945	INFECTED QUARTERS				
						BEFORE TREATMENT		AFTER TREATMENT		
						INFECTED QUARTERS	LEUCOCYTE COUNT	DATE 1945	INFECTED QUARTERS	LEUCOCYTE COUNT
1597	6	8	3 mo.	200,000	4/5	LF	1,500,000	5/8	0	0
1370	6	7	1 yr.	200,000	4/5	LH	40,000,000	5/8	0	500,000
1146	8	3	2 yr.	200,000	4/5	RH, LF	1,000,000	5/8	0	0
989	13	5	6 mo.	100,000	4/5	RH, LF, LH	1-4,000,000	5/8	0	0
294	8	5	1 yr.	100,000	4/5	all	1-2,000,000	5/8	0	500,000
1106	10	11	4 yr.	100,000	4/5	all	2-5,000,000	4/23	RF, RH, LH	2,000,000

LF = Left Front, LH = Left Hind, RF = Right Front, RH = Right Hind.

200,000 units of penicillin. All cows and quarters were cured. Six cows with 10 infected quarters were cured by one treatment. One cow with staphylococcic mastitis in one quarter was given four injections and was cured.

Twenty-one cows with streptococcic mastitis (*Str. agalactiae*) in 40 quarters were given one, two, or four injections of 100 cc. of solution containing 100,000 units of penicillin. Nineteen cows (90.4%) and 36 quarters (90%) were cured. Nine out of 10 cows and 15 out of 18 quarters treated with one injection were cured. Three out of 4 cows and 11 out of 12 quarters treated with two injections were cured. All 7 cows and 10 quarters given four injections were cured. Examples of the results obtained with a number of selected cases are recorded in tables 1 and 2.

Four cows with staphylococcic mastitis in five quarters were treated with four injections of 100,000 units of penicillin, and all were cured. One cow out of 3 and five quarters out of eight were cured when one injection was given.

The 2 cows with streptococcic mastitis, not cured on first treatment, were retreated. One of these cows had previously been treated with two injections of penicillin,

later with one injection of 200,000 units, with only one quarter being cured by this treatment. This cow showed infection with *Str. agalactiae* over a four-year period. No further treatments have been given this animal.

No toxic reactions were observed on administration of the penicillin. Sterile water and saline proved equally satisfactory as diluents. The foremilk showed some yellow discoloration with clots, but this condition generally cleared twenty-four hours after treatment. No loss in milk production was noted. All of the cows producing discolored or stringy milk before treatment gave normal milk after treatment.

SUMMARY

In all, 33 cows and 59 quarters with streptococcic mastitis (*Streptococcus agalactiae*) were treated with penicillin, and 31 cows (93.9%) and 55 quarters (93.2%) were cured. The 2 cows not cured by the first treatment were retreated and 1 of these cows was cured. Eight cows and 14 quarters with staphylococcic mastitis were treated with penicillin, and 6 cows (75.0%) and 11 quarters (78.5%) were cured. The cases of streptococcic or staphylococcic mastitis not cured by the first administration

of penicillin were cows given one or two injections of 100,000 units of penicillin per 100-cc. dose. No mastitis streptococci or staphylococci could be detected in any of the cows considered cured when quarter samples were tested at weekly intervals

of sterile saline or distilled water *via* the teat canal. In more acute cases or cases of long-standing, chronic infection, one or more injections containing 200,000 units may be necessary.

Staphylococcal mastitis is more difficult

TABLE 2—Protocols of Typical Streptococcal Mastitis Cases Treated with Penicillin
Treatment 2. Injections of 100,000 or 200,000 Oxford Units of Penicillin in 100 cc. of Sterile Saline or Distilled Water

Cow	AGE IN YEARS	MONTHS OF LACTATION	PERIOD OF INFECTION	PENICILLIN (UNITS)	DATE 1945	INFECTED QUARTERS			
						BEFORE TREATMENT		AFTER TREATMENT	
						INFECTED QUARTERS	LEUCOCYTE COUNT	INFECTED QUARTERS	LEUCOCYTE COUNT
1331	7	11	3 mo.	200,000	4/5	LF	5,000,000	5/8	0
345	5	7	3 mo.	100,000	4/5	RF, LH	1-3,000,000	5/8	0
1150	8	9	3 mo.	100,000	4/5	RH, LH	5-10,000,000	5/8	0
1595	5	3	6 mo.	100,000	4/5	all	500,000	5/8	0
1279	12	8	1 yr.	100,000	4/5	all	1-5,000,000	5/8	0

LF = Left Front, LH = Left Hind, RF = Right Front, RH = Right Hind.

over a period of four to five weeks after treatment. It was found that the organisms were eliminated from the udder when tested three to seven days after treatment, and that the leucocytes also disappeared even in cows showing leucocyte counts of 20,000,000 or more per cc. before treatment.

CONCLUSION

Penicillin is highly effective in bovine mastitis. Streptococcal mastitis may be cured by one injection of 100,000 Oxford units of penicillin administered in 100 cc.

to cure and may require one or more treatments with 200,000 Oxford units of penicillin per 100-cc. dose.

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"Butch", the leather-neck Doberman-Pinscher, is credited with bringing 10 Japs to their death. He is seen here going into the elaborately maintained Japanese command post cave on the outskirts of Agana, Guam. Some of these caves, connected by passageways, extended into the ground 100 yards or more.

Observing Bacteriophage

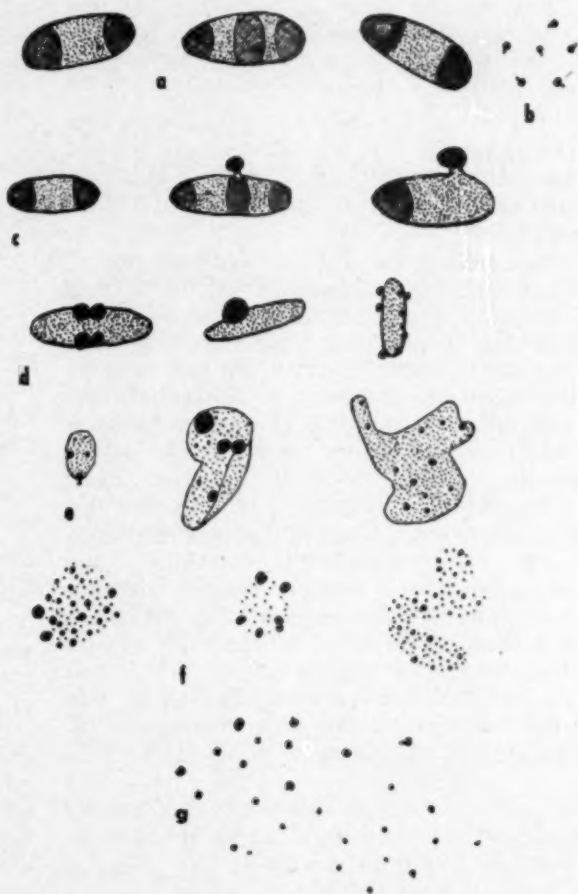


Fig. 1—Progressive stages in the lysis of bacterial cells as indicated by stained material examined under the ordinary microscope. (a) Cells of the pea nodule organism. (b) Bacteriophage particles. (c) Cells in early stages of bacteriophage action. (d) Cells in which bacteriophage action was well under way. (e) Partially lysed cells showing protoplasm in which the development of densely staining bodies is evident. (f) Remnants of cell protoplasm among which are numerous bacteriophage particles that have developed from the cell protoplasm. (g) A concentration of densely staining bodies around an area that was probably one or more cells, but in which no cell material is evident.

The bacteriophage has been an interesting subject for research since 1915, when Twort found that a lytic substance had developed in some of his cultures and dissolved the bacteria. In 1917, d'Hérelle described a similar substance, and gave it the name bacteriophage.

The study has been difficult, because the bacteriophage grew only in living cells, and the ordinary methods of staining and examining *in vitro* did not reveal what was

going on. With a new staining technique and use of the electron microscope, it has been possible to delve more deeply into the nature of the process. The accompanying series of drawings show what happens to bacteria attacked by the "phage," and has been arranged in sequence as the lysis probably progresses. This work was done by Hofer and Richards, and is reported in *Science*.

A lacquer made from milk is used to replace tin in coating cans used for evaporated and condensed milk. Lactic acid and castor oil make the lacquer.—*Science News Letter*, May 19, 1945.

soles to be applied without removing the shoes from the horse.—*From Pathfinder*.

Carcinoma of the prostate may be due to androgen-estrogen imbalance, according to a report in *Biological Abstracts* (1945) from *Northwest Medicine*. Growth is activated by androgen and neutralized by estrogen (stilbestrol), and the objection to the treatment is that it causes enlargement of the breasts with sensitive nipples.

Electric welding is the latest wrinkle in blacksmithing. As practiced by Chas. W. Chism, Coshocton, Ohio, it permits "half

Silent Rabies

The reason this case is submitted for consideration is because of its peculiar symptomatology, and the potential pitfalls which might be incurred thereby.

This type of rabies has apparently been recognized by Dr. Karl Meyer and others, but we fail to find reference to it as a specific entity in any of the current literature on rabies.

The subject was a 9-week-old male pup, of a nondescript type, probably of Fox Terrier lineage. The owners had constantly teased this dog by pinching it, and scuffling their feet at it until it would growl and snap on the slightest provocation. This behavior was rather misleading history as the dog exhibited these traits when brought to the hospital for diagnosis.

The history in effect was that the dog had bitten 19 people in the previous two weeks, 1 child on the face. Habits of the pup were normal in every respect with the exception of an increased aggressiveness and tendency to bite, in what the owners thought was a playful mood. Food and water intake was normal, but there was some tendency toward unprovoked barking.

An immediate diagnosis of rabies was made and the dog confined for further observation. Pasteur treatment was recommended for immediate administration to the child bitten on the face.

From October 31 to November 8, a period of nine days, the dog ate and drank ravenously, with the usual responses of tail wagging and interest that a normal pup would show when approached. There was continuous barking when aroused, the voice becoming somewhat hoarse as time progressed. This factor was attributed to the constant barking. On November 7, there was noted a slight stiffness in the hind legs, but not to a very perceptible degree. Death occurred suddenly November 8.

The Arizona State Laboratory demonstrated numerous Negri bodies in the first slide made, and a specimen was forwarded to Dr. Karl Meyer at the University of California for further study. Excerpts from Dr. Meyer's observations are as follows:

1) "Silent" rabies with an interval of ten, even twenty days between the first stage and the death of the animal has been reported. Likewise, the absence of paralysis and the abil-

ity, in fact the desire, to accept water and meat up to a few hours before death have been recorded by Lungwitz, Rossi, and others. The relatively slow evolution of the lesions in the central nervous system is amply attested by the microscopic findings.

2) The mice-inoculation tests will unquestionably confirm the microscopic diagnosis.

Note: A later report advised that the mice inoculated with this dog's brain tissue started to die on the ninth day.

It is apparent that this type of rabies deserves recognition along with the well-known and constant symptoms of the dumb and furious types, and it is hoped that this report may come to the attention of writers on this subject.—*F. D. McMahon, D.V.M., Phoenix, Arizona.*

Bloat in Dairy Cows

Recent observations indicate that bloat is caused by gas accumulation, rather than simply by gas formation. Legumes and grasses each form about the same amount of gas in the rumen, and ferment at about the same rate, yet the former cause bloat, and the latter do not. Something seems to interfere with the belching mechanism when the rumen is filled with leguminous material, and anything that interferes with belching causes bloat. It may be that belching ceases because the tender shoots from the tips of the legumes do not scratch the rumen walls hard enough, or certain gases produced in the fermentation inhibit belching, or a saponin may be present and cause the gas in the rumen to form into tiny bubbles instead of to collect in large masses which can be removed from the rumen by belching.

Moreover, in bloat, death does not result from pressure but from poisoning, as can be shown by injecting quantities of air to a pressure much in excess of that at which bloated cows commonly die. Fermentation in the rumen results in the formation of five gases: hydrogen, carbon dioxide, marsh gas, carbon monoxide, and hydrogen sulfide. The first three are most abundant in fermentation of grass, while considerable quantities of the last two are present when a legume ferments. The first three appear to be quite harmless when pumped into the rumen, but the animal begins to

show distress when either of the last two are present in more than trace amounts.

Relief is promptly secured by passing the stomach tube and removing the accumulated gases. Relief can then be maintained by pumping suitable antiferments into the rumen. Most of the home remedies, such as turpentine, formalin, oils, etc., work much more slowly, and are therefore less effective.—Dr. A. F. Schalk, in *Successful Farming*, June, 1945.

Hormones in Dairy Cattle

The use of hormones has produced some rather startling results in certain animals. One virgin heifer is reported to have produced 8,046 lb. of milk and 383 lb. of fat in 305 days, but by and large the results have been disappointing. Only about 50 per cent of the treated animals gave an amount of milk that was significant. A great many treated animals became chronic bullers, and in one experiment in England 20 per cent of the treated animals suffered pelvic fractures.

Writing in *Western Dairy Journal* for May, 1945, H. H. Cole concludes that although these results are extremely interesting, more experimental work is necessary before the use of estrogenic hormones can be recommended to commercial dairymen for bringing sterile heifers or cows into milk.

Trichomonas Vaginalis

Trichomonas vaginalis Donné is harbored by approximately 25 per cent of child-bearing women in the United States. It is the most common of the human protozoan parasites, according to Russell and Johnson, University of Iowa, in the *Puerto Rico Journal of Public Health and Tropical Medicine*. Although discovered by Donné of France in 1836, no significance was attributed to its presence in the vagina until 1916, when Hoehne of Germany ascribed pathogenic properties to it in describing the clinical entity he named "trichomonas colpitis." Hoehne based his contention of pathogenicity on the constant presence of the parasite in typical cases of purulent colpitis but in the absence of pure cultures he could not satisfy the postulates of Koch. Though new interest in the parasite was aroused, its pathology and epidemiology re-

main controversial after three decades. *T. vaginalis* is more difficult to cultivate in chicken embryos than its bovine counterpart—*Trichomonas foetus*—which was so cultured by McNutt and Trusell of Iowa State College Research Institute in 1941. *T. foetus* was first described as a bovine pathogen by Emmerson, University of Pennsylvania, in 1932.

Ferrous and Ferric Iron

According to recent investigations (*J. Am. Med. A.*, April 21, 1945, p. 1056) the sulfate and chloride of ferrous (divalent) iron are superior to the salts of ferric (trivalent) iron. Ferrous iron has been proved to absorb better than such trivalent salts as ferric ammonium citrate or the organic irons once touted as the answer to all questions of iron therapy. Until the biochemist came to the rescue of the pharmacologist, the organic compounds were heralded enthusiastically as capable of going straight to the red cell, while the inorganic irons were said never to leave the alimentary canal. That is now known to be untrue. The sulfate of ferrous iron, favorite in veterinary practice, according to work of pediatricists, has important hematinic action in anemia of children just as veterinarians have found it a veritable panacea in pig anemia. The importance of the new revelation is that veterinarians will henceforth restore their confidence in sulfate of iron which the old veterinarians never discounted, not forgetting the rôle of copper in iron therapy.

Adrenalin for Treating Malaria

Atabrine is neither a cure for, nor a sure preventive of, malaria; it simply keeps people from showing symptoms as long as they take it. The malaria parasites mature and sporulate in the spleen, where the red corpuscles have little or no plasma to protect them. Adrenalin contracts the spleen and forces the parasites out into the circulation where there is plenty of plasma. Injecting adrenalin once a day for thirty days or three times a day for ten days is reported to have a very favorable effect in shortening the period of recovery.—*From Science Digest*, June, 1945.

Feeding the Orphan Foal

Mare's milk contains more sugar, but less protein and fat than cow's milk. A reasonable substitute may be produced by adding to 1 pint of milk from a low-testing cow 1 tablespoonful of lactose or glucose and 3 or 4 tablespoonfuls of lime water.

Feed this from a bottle with a large teat, and at body temperature. The newborn colt should have about 5 ounces every hour for the first day or two, gradually stretching the time between feedings and increasing the amount of the feeding, so that at the end of a week the colt is eating every four hours, and at the end of two weeks every six hours.

At the age of 3 weeks the sugar can be reduced, and at 4 weeks discontinued. At this time the colt can nibble grass and have a small amount of solid feed, such as rolled or crushed oats and bran. When 6 weeks old, skimmilk may be fed instead of whole milk, and at 2 months solid feed should begin to replace milk more rapidly.

If scours appear, give 2 or 3 tablespoonfuls of castor oil and substitute sweetened water and lime water for the milk for two or three meals. Cod liver oil increases the growth rate.—[*From J. Mining and Agric.*, reprinted in *Veterinary Record*, April 7, 1945.]

Swine Influenza Vaccination

The antibody-inducing capacity of swine influenza vaccine has been studied in swine, using virus that was inactivated with formalin, or with ultraviolet light. Antibodies are produced, and the titer is related to the dose, but the response is not directly proportional to the size of the dose. The titer rises to its highest point in about a week, and then drops off rapidly.

When the animal is revaccinated, the titer rises to a much higher point, and drops off much more slowly. The titer attained and the amount of antibody produced are increased as the interval between vaccinations increases, with an interval of four weeks being regarded as most satisfactory. When repeated vaccination is practiced, much smaller doses appear to be as effective as large ones, and much more effective than single, large doses.

A high degree of concentration and partial purification of influenza virus can be obtained by ultracentrifugation of the chorioallantoic fluid of virus-infected chicken embryos. Procedures have been devised for practical large-scale production of virus for the preparation of vaccines.—*From Science*, May 25, 1945.

Research in Swine Breeding

An experimental effort to discover, develop, and test procedures of breeding and selection that may speed improvement of hogs is being carried on at the Regional Swine Breeding Laboratory at Ames, Iowa. The techniques used in forming breeds include crossing of stock differing markedly in type, conformation and color, inbreeding of the crossbred stock, and selection to meet a need or fancy. The laboratory is trying to use inbred lines and methods similar to those used in breeding corn and chickens.

Investigations are in progress to determine the different rates of inbreeding to form inbred lines, the amount of inbreeding necessary to fix productive characters, the amount of hybrid vigor that may be expected from crossing inbred lines, the results to be expected from using inbred and line cross boars for topcrossing on noninbred sows, and measures to be used in making selections.

Some 42,000 pigs have been produced in 42 inbred lines of five breeds and three crossbred foundations, but it is not yet clear whether these procedures are economically practical for extensive hog production.—*From Iowa Veterinarian*, May-June, 1945.

Hexachlorethane in Hepatic Distomiasis

The treatment of 4,200 trematode-infected cattle in the Gulf Coast region with hexachlorethane-bentonite suspension is reported in the October, 1944, report of Chief A. W. Miller, of the U. S. Bureau of Animal Industry. Remarkable improvement was obtained in manifestly unthrifty subjects, except in patients suffering from seriously damaged livers. The best results were derived in cattle in good or fair condition. In animals reexamined two to three weeks after treatment, only 5.6 per cent out of 476 treated were still passing eggs. Autopsies

showed that treated animals have but 2.7 flukes each as compared with 40 flukes in the untreated ones. The dose of the suspension was 100 cc. The trials were continued in other states of the Rocky Mountain region and Florida.

Grasshoppers Injurious to Turkeys

In the fall of the year when grasshoppers are sluggish and other feed is scarce, turkeys may consume toxic amounts of them, but, ordinarily, grasshoppers are not particularly harmful. In Montana, farmers dry bushels of them for the winter feeding of their poultry, and observations in Alberta and Montana indicate that eating grasshoppers abundantly, even without other feed, is not found to be detrimental. A contradiction was reported, however, by the Oklahoma Agricultural Experiment Station (1934 and 1940) where Morris, Milby, and Penquite observed a certain degree of toxicity from the feeding of dried grasshoppers. The author believes there is a potential danger in this connection that veterinarians should heed. The prevention is feeding turkeys a liberal quantity of mash in the morning during the late fall months. The outbreak investigated occurred in Ontario where turkeys had died after eating *Melanoplus femur-rubrum* and *M. mexicanus*, the grasshopper species of that region. The lesions of the "poisoning" consisted of enteritis due to injury suffered from the legs of the insects, which even punctured the intestine.—[A. B. Wickware, *Poultry Pathology Laboratory, Ottawa, Ont.: Grasshoppers, Canad. J. Comp. Med. and Vet. Sci.*, 9, (March, 1945): 80-81.]

New Leprosy Remedy—Asiaticocide

The glucoside of *Hydrocotyle asiatica* of Madagascar is announced as having important action against leprosy. The product has been named asiaticocide by the French physicians who made the discovery of its favorable action. The drug has the same defatting action as the chaulmoogrates and morrhuates. It acts as a solvent of the waxy coating of the *Bacillus leprae*, and is said to soften and break down the nodules. Still more remarkable is its favorable action on the eye lesions if used before the

posterior chamber is involved.—*From the London Correspondent of the J. Am. Med. A.*

Changes in List of Popular Drugs

A list of the most popular drugs of 1910 contained:

ether	morphine
digitalis	diphtheria antitoxin
iron	smallpox vaccine
quinine	iodine
alcohol	mercury

The list for 1945 made up by the same authority—the *Journal of the American Medical Association*—is:

penicillin	antibiotics
sulfonamides	whole blood
blood plasma	quinine or substitute
ether	morphine
digitalis	arsphenamides
antitoxins	vaccines
insulin	liver extract
hormones	vitamins
cocaine	barbital derivatives

This survey, after thirty-five years, speaks well for the usefulness of ether, alcohol, iodine, digitalis, quinine, mercury, and iron. It shows additions but no replacements. In short, few drugs long used have ever been discarded.

Trichinosis develops in man as a result of eating pork or sausage containing pork, which has not been properly processed. It is a painful, serious disease, which may be fatal.

Because of the difficulty of proper inspection, pork always should be thoroughly cooked before it is eaten, or else the pork which is being used raw should be known to have passed through the special processing under federal inspection to make it safe for use raw.—*Bureau of Animal Industry, U. S. D. A.*

Texas was one of seven states having a high number of cases of rabies last year, says *The Cattleman*, as it issues the following recommendations to be followed in lowering the number this year: licensing of dogs, impounding and disposal of stray dogs, vaccination, strict quarantine of dogs suspected of rabies for at least six months, diagnosis by competent veterinarians, and destruction of rabid animals.

NUTRITION

MATERIAL FURNISHED BY THE COMMITTEE ON NUTRITION

Chronic Endemic Dental Fluorosis in Sheep

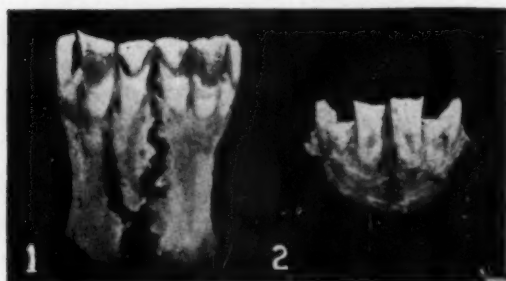
(An abstract)

Two instances of fluorosis are reported—the first natural cases on record in Australia. Since attention has been called to it, however, the condition, it seems, is widely distributed in Queensland.

The first flock observed was maintained on a property that has been in the hands of the present owner for twenty-five years. Dental trouble had first been noted in 1926,

hastened by chipping, which was evident on the attenuated anterior edge; a possibility of transverse fracture was suggested by the second pair of incisors.

The property involved in the second observation had two artesian wells. The water from one contained 19.0 parts of fluorine per million, while the other had 5.6 parts per million. Here again, the second pair of incisors seemed to be the first to suffer, although later the wear was equalized. Even more striking was the effect on the cheek teeth in these animals. The wear of the last lower premolar or first molar was so great that in some cases nothing of the tooth remained, and even the alveolus had disappeared. Wear on the second molar was, in some cases, so great as to suggest that in time it would suffer a similar fate.



—Australian Veterinary Journal

Fig. 1—Chalky incisors. Fig. 2—Chipped incisors.

when 20 per cent of his 6-year-old ewes were found to be affected. Since then, greater numbers of animals have been affected, and at a younger age. By 1939, the condition had progressed to a point where lambs and yearlings showed normal teeth, but about 40 per cent of the older animals had defective incisors.

The water supply in this instance was from an artesian well which delivered fluorine at the rate of 12 parts per million. The incisors in these sheep were chalky in appearance, often discolored, and sometimes showed the mottled color regarded as characteristic of fluorosis. They exhibited intense but irregular wear, the greatest effect at the age of 3 years being shown on the second pair of incisors. Wear progressed rapidly, so that in 4-year-old sheep all incisors, including the fourth pair, were completely worn down. Wear is apparently



—Australian Veterinary Journal

Fig. 3—Molars worn, chipped, and lost.

No enlargement of the mandibles was found in either observation.

Experimental work has indicated that when sheep were fed 60 mg. per day of fluorine, dental defects developed, but no trouble was experienced when the fluorine intake was reduced to 45 mg. per day. Assuming that the average daily consumption of water for sheep in the region here in-

volved is 0.85 gallon, a fluorine content of 12 parts per million represents a daily intake of 46 mg. In the other flock, an equal volume of water would represent an intake of 73 mg. of fluorine daily.

There is an important difference between experimental and range conditions, however. In the experimental lot, all of the fluorine consumed is represented in the amount actually being supplied in the water or with the feed. Under range conditions, on the other hand, a calculation is made from the water intake, but there is an additional, and possibly a considerable, amount of fluorine present in the plants of the region, and particularly on the plants in the form of dust.

There is also some evidence that it takes a smaller amount of fluorine in the water to produce dental defects than it does in dry form with the feed. For example, in 1937 it was found that 74 per cent of the school children in one community in Queensland had teeth with mottled enamel, although the water supply contained only 3 parts of fluorine per million.

From these two observations, there may be set down briefly what seems to be the progress of the dental lesions in sheep:

1) With sheep on the fluorine intake level concerned in these cases, the effect was not readily apparent until the animal was 2 years of age.

2) During the third and fourth years, marked irregularity in the wear of the incisors was noted. The change first affected the second pair of incisors, the labial surface of which showed a characteristic mottling of the enamel. The shaft of the tooth appeared chalky. Soon there was marked wear, possibly fracture, so that these teeth became shorter than the first pair. The first, and later third and fourth pairs, suffered similarly. The wear at first may affect chiefly the posterior aspect, so that the tooth becomes chisel-shaped. The greatly thinned anterior edge chips off irregularly. Later, all these teeth quickly wear so that by 4 years of age the incisors may have the appearance of those of an animal twice that age.

3) Though changes may commence earlier, it was during the fourth and subsequent years that they were most marked in the cheek teeth. Of these changes, the most prominent was excessive wear of

certain lower teeth (particularly the third premolar and the molars), with compensating lack of wear of the uppers. This wear may be so great that the lower is actually ground away until the small portion remaining falls out and the alveolus disappears. Mottling of enamel may be present on the sides of the cheek teeth.

4) As a result of the abnormalities that develop, dental function could be so impaired that it would be impossible for sheep to maintain their condition. Frequently, sheep brought to veterinary officers were suspected of suffering from chronic worm infestation, but the lack of condition could rightfully be attributed to abnormalities of this type in the cheek teeth. Such cases have been individual rather than a large proportion of a flock and, therefore, may be due to causes other than fluorosis.

In the cases in question, complaint was made of general unthriftiness, but how far it could be attributed to the dental condition, and how much of it was brought about by pasture conditions, could not be ascertained. Probably both contributed.

On any property where fluorosis has a high incidence, it must have serious economic effects by interference with nutrition, so that the potential grazing life of the sheep is shortened.—[H. R. Seddon, D. Vc.S., Melbourne, Victoria: *Chronic Endemic Dental Fluorosis in Sheep*. Australian Vet. J., (Feb., 1945): 2-10.]

Sunshine Kills Riboflavin

The exposure of bottled milk to sunshine destroys important amounts of riboflavin. Exposed to sunshine between midmorning to midafternoon, the loss was 26 to 36 per cent in one hour and 54 to 68 per cent in two hours, in studies cited in *Nutrition Reviews*. The presumption was that the loss in bottled milk exposed to diffuse daylight is considerable. The effect of light during processing (milking, pasteurizing, etc.) was not believed to be as great as that in milk in bottles. In the actual lighting of a dairy plant, the loss was 9 to 16 per cent. The loss of riboflavin by the action of light is serious. The most important preventive is not allowing bottled milk to stand on the doorstep after delivery.

Tryptophane, one of the amino acids, is reported to possess marked retarding influence upon the development of dental caries.

EDITORIAL

The New Secretary of Agriculture

The appointment of Congressman Clinton P. Anderson, of New Mexico, to succeed Claude D. Wickard, of Indiana, as Secretary of Agriculture, like all of the previous appointments to that portfolio in the Presi-



Clinton P. Anderson, Secretary of Agriculture

dent's cabinet, is a notable event in the annals of American veterinary medicine. Ever since "Uncle Jerry" Rusk of Wisconsin, the first Secretary of Agriculture, addressed the annual meeting of this association at Washington, in 1891, while he and Dr. D. E. Salmon were unsnarling our knotted international relations that were keeping American meat out of the European markets, and meat inspection was the liveliest topic on the program, each Secretary of Agriculture has engraved a deep impression on the escutcheon of the American veterinary service. From a three-man laboratory in a frame shack, under Rusk's administration, to Beltsville of this moment is a long step forward, not to mention the personnel and equipment in the field, abat-

toirs, and research laboratories scattered over the country. There is no intention here to reassert the past but rather to express the hope of a still more brilliant future. The load is complex, the pack heavy, and the objective nothing short of the nation's security. May it continue to be so judged. The health of farm animals runs quite parallel to the country's welfare, and that no stretch of time or political agenda can ever change.

Though born in South Dakota forty-nine years ago, Mr. Anderson is a longtime citizen of Albuquerque, N. M., where he operates his 1,000-acre Lazy-V Cross Farm, 800 acres of which is irrigated and under intensive cultivation. He is an enthusiastic horseman, a breeder of Palomino ponies, keeps a hundred dairy cows and a small flock of sheep. His practical experience in farming and livestock is above the level of any of his predecessors. He is described as a much traveled man of personal charm, an accomplished speaker, and shrewd at contract bridge. His political career began in 1933, when elected treasurer of New Mexico. "Who's Who" indicates that he served two terms as Congressman at large and as field director of Federal Emergency Relief. He is a Presbyterian, Mason, Elk, and is high up in Rotary circles, having served a term as president of Rotary International.

The whole-hearted cooperation of the veterinary profession, in helping to maintain and to improve the efficiency of livestock disease control, meat inspection, and the other governmental veterinary services, is pledged to the new Secretary as it has been to his predecessors.

The basic function of the veterinary profession is to serve the people and by that token serve itself and its members. If reversing that order is easier than to preserve it, the fact itself is unassailable, and will not change.

Lavoisier and the History of Respiration*

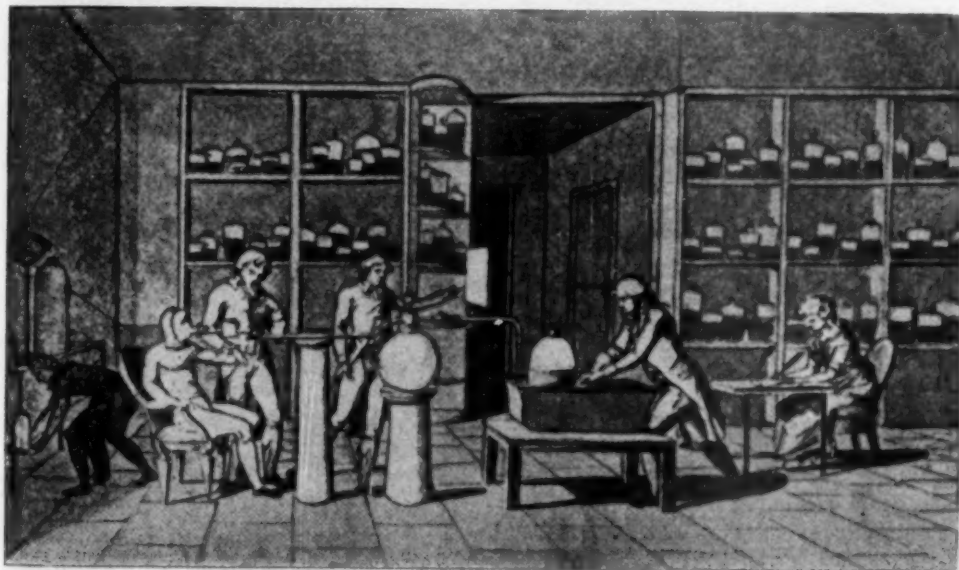
Mention of the famous chemist, Antoine Laurent Lavoisier, in the article titled "Dr. Paul de Marat, Veterinary Surgeon" (the JOURNAL, May 1945, page 301), turns the mind to the Section of the History of Medicine in the *Proceedings of the Royal Society of Medicine* for April, 1944, where the life and work of that chemist are described in elaborate detail. That the head of the notorious Jacobins of the French Revolution was the veterinary surgeon of the King's brother is not generally known, nor is it generally known that after his (Marat's) assassination on July 11, 1793, he was succeeded by Antoine-Francois Fourcroy, professor of general physics and chemistry at Alfort, then a struggling veterinary school leading a precarious existence in the hands of various cliques in and out of the government circle. Lavoisier was born in Paris of good stock Aug. 26, 1743, and was executed May 8, 1794. In 1771, he married a girl of 14 who devoted herself to his administrative and scientific work and became a brilliant woman. He was admitted to the French Academy

at the age of 25. His name will live through the ages because he upset the



—Reproduced by Permission

Fig. 1—Antoine Laurent Lavoisier and Mme. Lavoisier by David. The portrait was painted in 1788, and is now in the Rockefeller Institute, New York. Reproduced from *Proceedings of the Royal Society of Medicine*, April, 1944.



—After a drawing by Mme. Lavoisier

Fig. 2—How the process of pulmonary respiration was first demonstrated. The operator is Lavoisier. The experimental subject is his assistant, Seguin. Mme. Lavoisier, seated at the right, is making notes. The picture is reproduced from "*Proceedings of the Royal Society of Medicine*."

*If not interested in the development of the medical sciences, don't bother reading this.

medieval theory of the transmutability of matter, exploded the phlogiston theory of combustion, and was first to expound the atomic theory of modern chemistry. Up to then, the four "elements" of the Greeks and the three "principles" of Paracelsus were the bases of physics and chemistry. He introduced the nomenclature for chemical substances in use today at a public session of the French Academy on April 18, 1787, which rendered out of date all of the literature on chemistry then in use.

But, the work of Lavoisier that no stretch of time will ever delete was his discovery of the mechanism of pulmonary respiration that could not have been conceived ahead of the application of the atomic theory to the composition of gases and water. His laboratory work (see fig. 2) in fundamental biochemical research was set back many years by his execution in 1794, obviously, for the sin of serving his country's *regie des poudres* (administration of powder). There, says the author, the Revolution committed its most criminal act since, besides the stupid conviction, the science of respiration, more important to mankind than the internal politics of any country, had to wait for more than forty years before the next step on the physiology of respiration was taken. After his long trial and his execution, Politician Coffinhal remarked, "The Republic has no need of scientists," while Scientist La Grange retorted, "A hundred years will elapse before we have another Lavoisier." This narrative would not be complete without adding that Lavoisier's assistant, Seguin (see fig. 2) was accused by Mme. Lavoisier of claiming for himself certain of the discoveries her unfortunate husband had made.

Salt

It has recently dawned upon practical stockmen that failing to provide free access to salt has been a fault in livestock production. Instead of providing stock with free choice, salt is mixed in feed in hit or miss fashion, or, like wildlife, they must tread the beaten path to the saltlick when overtaken with salt hunger. Plasma maintains a fixed salt level. If the intake is not sufficient, the body tissues are drawn upon at the expense of their structure and their function.

Belated Report of an Executive Board Session

Science is not the hotbed of envy, hatred, or of rancor. In the biological world, to which veterinary medicine belongs, close international relations are the preventive formula. Chauvinism and science are not compatible. In effect, these were the thoughts expressed before a session of the Executive Board of the AVMA. The date was October, 1917. Place: secretary's office in Chicago. Object: routine business. President: F. Torrance, veterinary director general of the Dominion of Canada. Editor of the JOURNAL: Pierre A. Fish, professor of physiology, New York State Veterinary College. Chairman of the session: Veranus A. Moore, dean, New York State Veterinary College.

One of the subjects brought before the Board pertained to the feature in the JOURNAL under the caption, "European Chronicles," furnished monthly by Alexandre Liautard from his home in Paris, where he had repaired in retirement after a professional career of forty years in America. The older readers of the JOURNAL will recall that these chronicles (abstracts) occupied the first pages of each issue, and that they epitomized the current events of the veterinary world. A member of the Board contended that complaints were piling up against this feature and moved that it be abolished on the ground that the space might be used for "more practical material." It was the old saw about "practical" reading matter for veterinarians which no one has ever stopped to define. Anyhow, the issue was debated at some length, pro and con. As the AVMA of 1917 was too poor (or something) to transcribe its executive proceedings, the following remarks by Dean Moore are written from memory:

Men of science are fortunate that French, a universal language, is the clearing house of the world's scientific literature, the melting pot for Germanic, Russian, Scandinavian, Slovakian, Japanese, and the Latin tongues. You will note, gentlemen, that Dr. Liautard's monthly chronicles skim the surface of current veterinary knowledge quite thoroughly, regardless of origin, places it at the disposal of the American veterinarian and, if read intelligently, keeps us informed on the advancements of veterinary science.

Moreover, we seem too little aware that while Dr. Liautard was among us and through his continued interest, he shaped veterinary science

and practice to a large extent in this country. Whether we like to admit it or not, France has virtually kept watch over ours and other sciences by remote control because its language is universal. The pattern it laid for veterinary science in the eighteenth century was never materially changed in respect to educational scope and standards, faith in research, or in clinical methods. Its first curricular scheme incorporated the farm animals we are still neglecting. So, we owe much to Dr. Liautard for the service he renders in his retirement.

The Executive Board voted unanimously to continue "European Chronicles," after hearing this masterpiece. Living contemporaries of Dean Moore need not be told that it was spoken in quiet dignity. Abridged to fewer words, members of a learned profession should be exposed to what they need, not what they ask for, in reading material. The material that was filtering to us through Liautard's "European Chronicles" was a cure for what ailed us. If they were hard to take, so is castor oil. This kind of material brought us safely through the horse-doctor period of American veterinary science. The unanimous vote of the Executive Board on this apparently minor subject was important to the advancement of veterinary science in this country since 1917. It was a general directive to go forward, not to stand still, nor go backward. What should a vote on a matter of similar nature be in 1945? Before replying, ponder the sulfa drugs (German), penicillin (British), and DDT (Swiss). Come to think about it, we still owe something to "those foreigners" just as Dean Moore said, when "European Chronicles" were "on the carpet."

Brave (?) New World

Most of us have believed that the nationalization of medicine would simply be an entering wedge; we have thought of it as a beginning phase of the authoritarian State. This conception of a dragooned medicine at the hands of a planned State finds confirmation in Sir William Beveridge's* second report on his social-security scheme, just published by a New York firm. From this we learn that besides the control of medicine, Sir William looks forward to the control of food, fuel, clothing, and labor. The Minister of National Finance under his scheme would plan both private and public outlays. No new factory would be built unless approved and the builders could not locate it anywhere. Registered labor (all over eighteen) would be controlled as to place of work, in other words, the mobility of labor would be state-organized. Consumption would be guided by taxation and price and wage control. All private investment would be directed—approved or disapproved—by a National Investment Board.

It sounds incredible, but this is the intention and the plan. It is easy to see how a controlled medicine, as a starter, would set the pattern; thus the individual physician would be located and moved by the Ministry of Health.—Excerpt from an editorial in *Medical Times*, April, 1945.

*Liberal member of Parliament, representing Berwick-on-Tweed, Scotland.



The pigeon, "Gustav", wears the Dickens Medal for Bravery. The medal was presented by the wife of the Lord Mayor of London, on behalf of the Allied Forces Mascot Club, to the pigeon for bringing back the first message from the Normandy beaches.

—Acme Photo

CURRENT LITERATURE

ABSTRACTS

Promin in Experimental Tuberculosis

The inhibiting action of promin on the course of tuberculous infection experimentally produced in guinea pigs has been amply proved. The lesions in treated guinea pigs remained small and tended to heal and a large percentage of those treated daily for six months did not develop parenchymal lesions. Important results were obtained even when the promin treatment was withheld until well-developed lesions were present.

The virulence of the organism recovered from lesions persisted in a large proportion of cases. It is, however, significant to note that a large majority of the experimental animals treated daily for six months did not develop organic lesions. The obvious conclusion is that the drug exerts a specific action against the organism, either directly or indirectly. This was further confirmed by the observation that infected guinea pigs given prolonged treatment eventually died of tuberculosis after the medication was stopped.—[William H. Feldman and H. Corwin Hinshaw, Mayo Foundation, Rochester, Minn.: *Promin in Experimental Tuberculosis*. *Am. Rev. Tuberc.*, 51, (March 1945): 268-275.]

Biology in Agriculture Lags

Biologists have not measured up to their opportunities in the war effort, although the war has shown clearly that in the future the biological arts and sciences will assume a much more important rôle in the public service. For the first time in our history, food has become an instrument in national and international policy, as was shown before, during, and since the Interim Commission of Food and Agriculture of the United Nations met at Hot Springs to set up a food policy for the civilized nations. Although food production has increased in the United States and Britain since 1939, further increases rather than recessions will occur in the postwar period. Means must be found to take care of surpluses, either by doles or disposal at low prices. As in education, means must be found to get the output to the people. The essence of professional service is that it should provide what the clients need—not what they want. Though acutely aware that they

need help, clients lack a clear conception of what they need from any profession. Scientists know this to be human nature. Educating the public to its needs is slow and difficult. When the inventor of the air brake (Westinghouse) went to the railroad magnate (Vanderbilt), the r.m. remarked that he "had no time to bother with damn fools." Professionals of the plant and animal sciences have not had the organization to get the appropriations to carry on, and when they did get the necessary funds from the government there was not always a competent personnel available to do the work, because, in the biological and agricultural sciences, educating the public as to its needs in the way of service is a task undone [as is so often pointed out by devotees of veterinary medicine—Ed.]; and, quoth the author, that is the biologist's greatest weakness, a weakness that ought to "set his mind to work figuring out those ways by which his specialty could contribute most to the public welfare." The inter-relation of forage plants, rodents, insects, predatory animals, and livestock calls for large groups of specialists who do not exist, because no one has convinced the people that such specialists are needed. Epitomized, the biologists have failed—failed to impress the public of its insecurity without them.—[Dr. Robert F. Griggs, *National Research Council: Biology and Agriculture in the Postwar World*. *Science*, 101, (March 9, 1945): 235-239.]

The Role of Nutrition in Equine Periodic Ophthalmia

The *American Journal of Veterinary Research* (April, 1945) carries an excellent article by Jones, Maurer, and Roby, of Front Royal, Va., in which they present evidence that nutrition may play a vital rôle in periodic ophthalmia.

Equine periodic ophthalmia has many characteristics in common with certain conditions which, in rats, dogs, and man, are caused by riboflavin deficiency. The syndrome is initially characterized by photophobia, dimness of vision, epiphora, circumcorneal congestion, corneal vascularization, and corneal opacities. Later, iridocyclitis with resultant posterior synechia, cataract, vitreous opacities, or retinal detachment may supervene. The occurrence of such strikingly similar syndromes in different

species is of great interest and suggests a common etiology.

Studies with the slit lamp and corneal microscope reveal microscopic vascularization in all cases of periodic ophthalmia, and in some equine eyes prior to the development of iridocyclitis. Cataract formation is one of the end points in many cases.

The same type of vascularization of the cornea is the first indication of riboflavin deficiency in rats, dogs, and man. In rats, cataract may follow prolonged deficiency under certain conditions. Corneal vascularization occurs also in rats maintained on a synthetic ration deficient in tryptophane, an essential amino acid. Animals fed a vitamin-A-deficient diet show the same type of corneal vascularization.

The functions of ascorbic acid in the eye are concerned in the periodic ophthalmia syndrome, but it is not evident whether the relationship is one of cause or effect. It is possible that in the horse the ocular ascorbic acid is synthesized by certain intraocular tissues, although this is by no means established. The epithelium of the ciliary apparatus is believed to secrete the aqueous, and it is not unreasonable to hypothesize that this ciliary epithelium also produces the ascorbic acid found in the aqueous. Since riboflavin and nicotinic acid are essential components of respiratory enzyme systems, which are vital to intracellular metabolism, it follows that their presence in the ciliary epithelium may influence the production of ascorbic acid.

It is also brought out that while a dietary lack is the most common basis for vitamin deficiencies, it is by no means the only cause. Other factors may be important, especially in cases of marginal deficiency. Several members of the B complex are synthesized by microorganisms in the intestinal contents. Any change in the activity of these organisms would affect the amount of available vitamins. Other factors, such as the amount and quality of proteins, fats, or carbohydrates in the diet may be of importance in the problem.

Nutritional deficiencies in one species cannot be applied unreservedly to another, but when a nutritive element is required by two species, deficiencies of that element usually result in similar lesions in both. This makes the comparison of ocular lesions, known to have a nutritive basis, with the lesions of equine periodic ophthalmia of great interest.

The development of equine periodic ophthalmia is discussed step by step, and is well illustrated with clear photomicrographs.—[Major T. C. Jones, V.C., Major Fred D. Maurer, V.C., and Lieut. Thomas O. Roby, V.C., *Front Royal, Va.: The Role of Nutrition in Equine Periodic Ophthalmia. Am. J. Vet. Res.*, 6, (1945): 67-80.]

BOOKS AND REPORTS

Proceedings of United States Livestock Sanitary Association

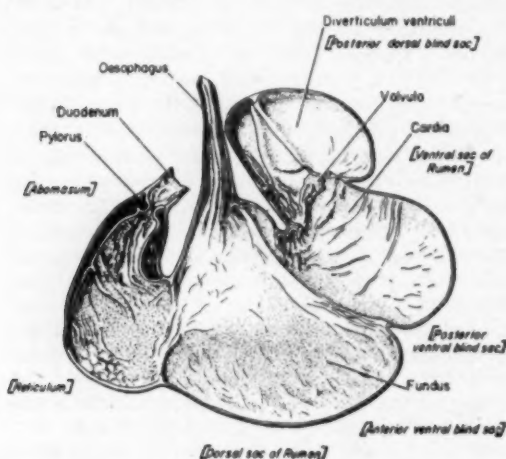
The annual report of the USLSA is always a rich source of useful knowledge—a "what's what and who's who" in livestock sanitary science. Being another link forged chronologically into the foremost branch of veterinary science, at a time when national security hinges upon its vigorous application, the value of this compendium for 1944 could not be too highly assessed in the livestock world, not to say in the general whirl, as man's dependence upon the health of farm animals takes on a broader meaning outside, as well as inside, the task force fighting off the enemies of human subsistence. Viewed from any tangent, the magnitude of the task essayed and the progress made by the USLSA in forty-eight years would be hard to match by any of the voluntary custodians of human welfare. Though mainly a society of public officials in harness, its strength lies in the polyarchy of its membership and sponsors: stockmen, veterinarians, research workers, physicians, and industrialists, who strive to overcome the disadvantages of decentralized government to the nation's biggest industry, by evoking the combined decrees of science and sound economics. The reports are a true history of achievement and failure of the federal and state governments to bring unity and order out of 48 sets of conflicting regulations. These annual documentations of livestock sanitary science are great lessons in American politics at work. If the analytical reader finds the federal government more florid than the states (or *vice versa*), none would deny that close cooperation is the keystone of the arch. In other words, the USLSA is more a means of turning chaos into understanding than an argument for decentralizing power in matters of common concern.

The 1944 report, covering the usual gamut of grave diseases of livestock and poultry, is in the form of addresses, papers, committee reports, and resolutions by selected specialists. For a book so widely read by the readers of the JOURNAL, a review of scope and detail would be redundant. Mention should, however, be made of the resolution consolidating the term "Live Stock" in the Association's name to conform with popular usage, and the one adopting "brucellosis" in lieu of "Bang's disease" in its literature. To these timely improvements the critical critic might add to advantage that the great USLSA would do well to abolish the use of the nondescript and non-definable word "biologics," which keeps bobbing up like a sore thumb in some veterinary literature. The reason veterinarians ought to

be careful in such respects is because they are veterinarians. This uplifting business is "gosh awful" hard if we don't quit using "gosh awful" language in our pleas for a seat among the lofty.—[*Proceedings Forty-Eighth Annual Meeting, United States Livestock Sanitary Association, 1944. 223 pages. Paper. Waverly Press, Inc. Baltimore. 1945. Price, \$2.00. Free to members.*]

The Anatomy of Babirusa

Although first published five years ago, this section of the Zoölogical Series of the Field Museum* has escaped notice in veterinary literature. The importance of this genus of the hog family (Suidae) is its rarity among living



Stomach of the ancestral hog, *Babirusa babyrussa*. The regions corresponding to parts of the stomach of ruminants are shown in brackets.

fauna and that it is a sort of connecting link between monogastric and polygastric mammals. Though truly a hog according to the rules of zoölogical taxonomy, the stomach of the *Babirusa* is comparable to that of the sheep, minus the omasum and fully developed reticulum. Its phylogeny has been studied largely from fossil material, particularly from the teeth, which fall short of furnishing much of a clue to the soft anatomy in any event. This booklet is based upon a rare adult male *Babirusa babyrussa*, L., in the collection of the Chicago Zoölogical Society, which died and was dissected by the author before reducing the cadaver to a skeleton. The head and body length was 104 cm.; tail, 27.5 cm.; skull length, 31 cm.; zygomatic breadth, 12 cm.

The muscular and splanchnic systems and maxillary denture are presented by color plates,

drawings, and graphic descriptions.—[*D. Dwight Davis, Assistant Curator, Field Museum of Natural History: Notes on the Anatomy of the Babirusa. Zoölogical Series 22, (Aug. 6, 1940). Paper. 48 pages. Illustrated. Field Museum of Natural History, Chicago.*]

The Artificial Insemination of Farm Animals

A comprehensive presentation of the subject of artificial insemination by vigorous and experienced authors cannot be over-praised in the face of the rapid development of that way of breeding. The scattered literature, complete and excellent as it is, does not serve the needs of this hour, so this book should be heartily welcome. Teachers, students, and practitioners, bent on practicing that art, will thank the Rutgers scientists and other contributors for placing such a book at their disposal. It covers the field: cattle, sheep, solipeds, fowl, and swine in respect to their present development, advantages and disadvantages, techniques, coöperative breeding societies, the handling and shipping of semen, and diseases related thereto. The history of artificial insemination from 'way back when to the present time is five pages of basic knowledge revealing that, while the procedure has age to its credit, large scale application is relatively new. Barring the pioneer work of Ivanoff in Russia begun at the turn of the century, all of the rest is either sketchy or decidedly recent—very much so, since the first coöperative work essential to the development of artificial insemination began only in 1938 when Holstein-Friesian breeders in New Jersey formed the first of the breeding associations now in operation. What lies in store for the other branches of animal production may be deduced from the text of this book. The authors go into a huddle with experts on each species of farm animal: Berliner on solipeds, Terrill on sheep, Jeffrey on birds, and government specialists on swine. To acquire a comprehensive understanding of artificial insemination and the details of successful application, so far as are now known, read this manual. The canine species is not included, obviously on the ground that the dog is not a farm animal.—[*The Artificial Insemination of Farm Animals. By Enos J. Perry, Editor, Rutgers University, 265 pages. Cloth. Illustrated. Rutgers University Press, New Brunswick, N. J. 1945. Price \$3.50. Veterinary Distributor: Alexander Eger, Inc., 63 E. Adams St., Chicago 3, Ill.*]

To learn all the truth about a soldier's life read "See Here, Private Hargrove." The author's full name is Edward Thomas Marion Lawton Hargrove, dog tagged 34116620, of Mt. Olive, North Car. (pop. 2,929). It's 164 pages of fact, not fiction, and not without plenty of humor. Price, 2 bits at the news counters.

*Now Chicago Natural History Museum.

THE NEWS

AVMA Business Sessions—August 20-22, 1945

As announced in the June JOURNAL, meetings of the Executive Board and House of Representatives only will be held this year because of the ban on conventions. These are scheduled for the Palmer House, Chicago, beginning on Monday, August 20, and concluding on Wednesday, Aug. 22. In addition, the Board of Governors will meet on Sunday, August 19.

It will be possible to transact all of the usual association business at this meeting except the election of officers; the present officers will carry over for another year.

Following is the general schedule:

SUNDAY, AUGUST 19

p.m.—Board of Governors.

MONDAY, AUGUST 20

a.m.—Board of Governors.

p.m.—Executive Board, first session.

TUESDAY, AUGUST 21

a.m.—Executive Board, second session.

p.m.—House of Representatives, first session.

WEDNESDAY, AUGUST 22

a.m.—House of Representatives, second session.

p.m.—Final session, House of Representatives (if necessary). Final session, Executive Board.

Meetings will be held at the Palmer House. A more detailed program of the business sessions will appear in the August issue of the JOURNAL.

Constituent associations have been requested to advise the central office if they will be represented at the 1945 business meeting. Delegates are advised to make transportation and hotel reservations as far in advance as possible.

AVMA members in the Chicago district, who use the regular transportation facilities of the metropolitan area, are invited to attend the sessions of the House of Representatives, and may do so without violating the letter or spirit of the ODT rules regarding meetings.

The Outlook for Resumption of Association Meetings

The more or less voluntary ban on conventions which has been operative since early in the year will, to all appearances, need to be continued for several months at least. The cessation of hostilities in Europe and the Army's redeployment plan for the Pacific theatre call for the movement of some 300,000 men each quarter, according to press reports. Most of

these men, to say nothing of their supplies, require transportation on the country's railroads. Moreover, the return of American wounded from overseas hospitals will place an additional burden on the nation's transportation system for some time.

Military requirements for travel and hotel accommodations must certainly take precedence over any other demands. While wartime gatherings of scientific and professional groups are in the national interest in the long run and the necessity for their cancellation is to be deplored, yet there has been a most commendable spirit of cooperation on the part of national and state organizations of all kinds.

A recent release from the Office of Defense Transportation states that the Wartime Committee on Conventions received 1,088 applications for the holding of conventions and group meetings in February, March, and April. Of this total, 69 were approved, 684 were denied, and 335 were for meetings not covered by restrictions. The last mentioned group comprised for the most part, presumably, those meetings which have an out-of-town attendance of 50 or less persons who required railroad and hotel facilities, in addition to the local attendance. Such conventions, conferences, and group meetings do not require permits.

As it now stands, veterinary association meetings which attract an attendance of more than 50 persons, who must use transportation other than the regular facilities available within the city or suburban area, would not receive permits. For such groups and in view of the record of denials, it seems wise not even to make application until the restrictions are relaxed or entirely removed. The only exception seems to be in the case of veterinary post graduate or "short course" conferences regularly conducted by educational institutions as a part of their educational programs; such conferences, in several instances, have been approved.

As previously announced, the AVMA meeting for 1945 will be limited to business sessions of the Board of Governors, Executive Board, and House of Representatives, which are scheduled to meet in Chicago, August 20-22.

Date Set for Women's Auxiliary Business Session

Mrs. H. Preston Hoskins, president of the Women's Auxiliary to the AVMA, announces that there will be a meeting of the Executive

Board (all officers and past presidents) in Chicago on the afternoon of August 21, 1945. The purpose of the meeting will be to transact such business as usually requires attention at the regular meeting of the Auxiliary.

Since there will be only business sessions of AVMA governing bodies this year, a very restricted number of veterinarians will be coming to Chicago. No convention features whatever will be scheduled, and there will be no social events of any kind.

Auxiliary members in the Chicago area are cordially invited to attend the board meeting on August 21. Officers and members will be advised of further details in the near future.

S/(MRS. C. L.) ROSE MILLER,

Secretary-Treasurer.

Proposed Amendments of Administrative By-Laws

The following proposed amendments are again published in accordance with Article XIII of the Administrative By-Laws. (See also the May, 1945, JOURNAL, pp. 309, 310 and 317.)

PROPOSAL No. 1

Amend Article XII, Section 1, "2. Committee on Education" so that it will read as follows:

2. Council on Education

1) *Personnel*.—The Council shall consist of nine members. Three of these shall constitute an executive committee of the Council and these members shall be elected by the Executive Board of the Association for a term of six years. The initial election shall be for two, four and six years, respectively, so that one member will retire and a successor will be elected every other year. Two members of the executive committee shall be members of the faculty of veterinary colleges accredited by the Association, one whose principal interest and training is in the basic or preclinical sciences, and the other whose interest and training is in the applied or clinical sciences. The third member shall be an active (general) practitioner of veterinary medicine.

The six remaining members of the Council shall be appointed by the President at the rate of one member per year, each to serve for a term of six years. Initially, the six members shall be appointed for terms of one, two, three, four, five, and six years, respectively, so as to provide thereafter for one annual retirement. One member shall be appointed from each of the following branches of veterinary science:

- a) Large animal practice.
- b) Small animal practice.
- c) Governmental service.
- d) Military service.
- e) Public health service (including meat and milk inspection).

f) Veterinary education or research.

The Council shall annually elect its own chairman and secretary.

2) *Duties*.—All veterinary colleges accredited by the Association shall be inspected at least triennially by the executive committee of the Council and a written report of each inspection shall be presented to the Council for its consideration. This report shall deal with all matters which have a bearing on the efficiency of the institution, i.e., size and competence of the faculty, physical plant and equipment, financial support, teaching methods in both clinical and preclinical sciences, size of student body in relation to that of the teaching staff and the amount of clinical material available, and the facilities for post-graduate training of veterinarians. Following approval of the inspection reports by the Council as a whole, copies shall be sent to the deans of the colleges concerned. The Council shall lend its assistance to college authorities in the realization of their objectives for progressive, higher educational standards.

The Council shall meet annually to consider reports of its executive committee, and for the consideration of any other matters which pertain to veterinary education. In its annual report to the Association it shall include a list of veterinary schools that are approved by it, and a list of those that have been inspected and found to be unsatisfactory. The Council shall draw up and publish a statement of minimum requirements for an approved veterinary school to provide a guide to institutions that are seeking approval. Upon request of such institutions, the Council may cause an inspection of the schools to be made by its executive committee. Reexaminations of such schools shall be made only when the Council has been convinced that deficiencies have been sufficiently corrected to warrant reasonable hope that the minimum requirements for approval have been attained.

PROPOSAL No. 2

Amend the first two sentences of the second paragraph of Section 2, Article VI of the Administrative By-Laws so they will read as follows:

The treasurer shall pay all of the legitimate expenses of the Association, including drafts to reimburse the revolving fund issued by the executive secretary or, in his absence, by the assistant executive secretary, and signed by the president. He shall issue checks against the treasury only on the signed approval of the president and executive secretary or, in the latter's absence, by the assistant executive secretary, who shall furnish serially numbered vouchers containing full details of the nature of the expenditures.

APPLICATIONS

The listing of applicants conforms to the requirements of the administrative by-laws—Article X, Section 2.

First Listing

- CAMERON, W. B.
2425 Bloor St. W., Toronto, Ont., Can.
B.V.Sc., Ontario Veterinary College, 1935.
Vouchers: G. A. Clark and J. A. Campbell.*
- CHRISTENSEN, NELS F.
E. 21st St., Cedar Falls, Iowa.
D.V.M., Iowa State College, 1933.
Vouchers: I. W. Moranville and G. B. Munger.
- GITZEN, GEORGE N.
129 N. Grape St., Medford, Ore.
D.V.M., State College of Washington, 1944.
Vouchers: G. F. Reid and J. E. McCoy.
- LUDLOFF, DR. O. W.
1321 Palolo Ave., Honolulu 47, T. H.
D.V.M., Kansas State College, 1934.
Vouchers: L. C. Moss and J. M. Hendershot.
- MOSER, SAMUEL H.
Mohrsville, Pa.
V.M.D., University of Pennsylvania, 1939.
Vouchers: S. F. Scheidy and H. B. Roshon.
- NYE, I. B.
103 Livestock Exchange, Fort Worth 6, Texas.
D.V.M., Texas A. & M. College, 1939.
Vouchers: L. G. Cloud and E. W. Wupperman.
- PHILLIPS, PERCY E.
92 Maple St., Winchendon, Mass.
D.V.M., Kansas City Veterinary College, 1915.
Vouchers: W. R. Smith and F. G. Ruder.
- SAWYER, R. A.
817—8th Ave., Brookings, S. Dak.
D.V.M., Iowa State College, 1926.
Vouchers: L. L. Dunn and R. S. Robinson.
- TURMAN, PAUL M.
P. O. Box 1016, Tyler, Texas.
D.V.M., Texas A. & M. College, 1938.
Vouchers: L. G. Cloud and J. W. Barton.

Second Listing

- McChesney, Gerald H., 1900 N. Broad St., Rome, Ga.
- Marston, E. D., 188 Highland St., Manchester, N. H.
- Meador, Ross E., Little Rock, Iowa.
- Mujica, Mario C., Casilla 1065, Santiago, Chile.
- Winkler, George W., 205 Post Office Bldg., So. St. Paul, Minn.

1945 Graduate Applicants

First Listing

The following are graduates who have recently received their veterinary degrees and who have applied for AVMA membership under the provision granted in the Administrative By-Laws to members in good standing of junior chapters. Applications from this year's senior

classes not received in time for listing this month will appear in later issues. An asterisk (*) after the name of a school indicates that all of this year's graduates have made application for membership.

Alabama Polytechnic Institute*

- ADAMS, EMORY T., D.V.M.
Chipley, Fla.
Vouchers: M. W. Williams and B. F. Cox.
- BECTON, PAUL, D.V.M.
Silas, Ala.
Vouchers: F. P. Woolf and E. S. Winters.
- BISHOP, WILLIAM W., D.V.M.
211 E. Thach St., Auburn, Ala.
Vouchers: M. W. Williams and W. E. Cotton.
- BOZEMAN, EDWARD C., D.V.M.
811 College St., Andalusia, Ala.
Vouchers: M. W. Williams and W. E. Cotton.
- BURCH, REUBEN F. III, D.V.M.
510 College St., Eastman, Ga.
Vouchers: M. W. Williams and B. F. Cox.
- CARLSON, EDWARD J., D.V.M.
Box 37, Fruithurst, Ala.
Vouchers: M. W. Williams and B. F. Cox.
- CAUDLE, HAROLD C., D.V.M.
O.T.S. House, Auburn, Ala.
Vouchers: F. P. Woolf and E. S. Winters.
- CHAPMAN, CECIL T., D.V.M.
816 Broad St., Jacksonville, Fla.
Vouchers: F. P. Woolf and E. S. Winters.
- COCHRAN, ALBERT B., D.V.M.
Box 222, Pauls Valley, Okla.
Vouchers: M. W. Williams and W. E. Cotton.
- DERRICK, JESSE D., D.V.M.
Oglethorpe, Ga.
Vouchers: F. P. Woolf and I. S. McAdory.
- FARR, HARRY F., D.V.M.
814 E. South St., Orlando, Fla.
Vouchers: M. W. Williams and W. E. Cotton.
- FULENWIJDER, HOWARD M., D.V.M.
1310 Altamont Rd., Birmingham 5, Ala.
Vouchers: J. K. McNamee and F. P. Woolf.
- GERSTEN, ELI, D.V.M.
103-26 68th Rd., Forest Hills, L. I., N. Y.
Vouchers: M. W. Williams and W. E. Cotton.
- GILMORE, W. H. JR., D.V.M.
1505 Pickens St., Columbia 49, S. Car.
Vouchers: F. P. Woolf and E. S. Winters.
- GOODE, EDWIN R. JR., D.V.M.
157 W. Hampton, Spartanburg, S. Car.
Vouchers: E. S. Winters and F. P. Woolf.
- GOODWIN, DONALD R., D.V.M.
906 Broadway, Little Rock, Ark.
Vouchers: E. S. Winters and F. P. Woolf.
- GREY, ROSS M., D.V.M.
Southern Pines, N. Car.
Vouchers: M. W. Williams and B. F. Cox.
- HATCHETT, GUY P. JR., D.V.M.
1025 McCallie Ave., Chattanooga, Tenn.
Vouchers: M. W. Williams and W. E. Cotton.

- HEADRICK, ABNER J., D.V.M.
123 Court A, Riverview Terrace, Tampa 4,
Fla.
Vouchers: M. W. Williams and W. E. Cotton.
- HESTER, CECIL J., D.V.M.
Vina, Ala.
Vouchers: F. P. Woolf and B. M. Jolly.
- JORDAN, MILTON T., D.V.M.
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Hull, Maurice, D.V.M., R.R. No. 1, Oak Hill, Kan.

Irwin, Jesse G., D.V.M., Wilsey, Kan.

Jarrett, R. M., D.V.M., Waverly, Ill.

Jernigan, Loyce D., D.V.M., R.R. No. 3, Osage City, Kan.

Kelman, Alva C., D.V.M., R.F.D. No. 1, Arlington, Kan.

Kendall, Kenneth, D.V.M., 1627 Laramie, Manhattan, Kan.

Latham, Leland A., D.V.M., Washington, Kan.

Lowrey, Ralph L., D.V.M., Larned, Kan.

McGargle, Paul F., D.V.M., Gays Mills, Wis.

Mansfield, Manford E., D.V.M., McCune, Kan.

Montgomery, Leon G., D.V.M., 353 N. 15th St., Manhattan, Kan.

Morrow, James F., D.V.M., Marysville, Kan.

Mosler, Jacob E., D.V.M., Hoxie, Kan.

Mullen, George A. Jr., D.V.M., R.R. No. 3, McCune, Kan.

Newell, Leslie H., D.V.M., 531 N. Manhattan Ave., Manhattan, Kan.

Olson, Jay R., D.V.M., R.R. No. 2, Glasco, Kan.

Peterson, Duane R., D.V.M., 421 N. 16th St., Manhattan, Kan.

Pickard, Ronald D., D.V.M., Thompsonville, Ill.

Reagor, Harry G., D.V.M., 30 California Ave., Reno, Nev.

Reed, Theodore H., D.V.M., Norton, Kan.

Ridgway, Joe J., D.V.M., 1803 Anderson St., Manhattan, Kan.

Riegg, Alfred, D.V.M., 1221 Thurston, Manhattan, Kan.

Roberts, George H., D.V.M., Cawker City, Kan.

Roseberg, Arthur R., D.V.M., Isle, Minn.

Shannon, Stephen B., D.V.M., 1425 Laramie, Manhattan, Kan.

Smith, David L., D.V.M., 107 W. New St., Coffeyville, Kan.

Smith, James, D.V.M., 1634 Osage, Manhattan, Kan.

Smith, Jean C., D.V.M., Mapleton, Kan.

Smith, John W., D.V.M., 1115 Bluemont, Manhattan, Kan.

Stiefel, Melvin J., D.V.M., c/o Alvin Anderson, Gypsum, Kan.

Streeter, William R., D.V.M., 4510 Lloyd St., Kansas City, Kan.

Tuttle, Thomas W., D.V.M., 523 E. Milwaukee Ave., Fort Atkinson, Wis.

Ungles, James M., D.V.M., Satanta, Kan.

Walker, Earl R., D.V.M., 421 N. 16th, Manhattan, Kan.

Wedman, E. E., D.V.M., 421 N. 16th, Manhattan, Kan.

Wreath, George C., D.V.M., Rt. No. 1, Manhattan, Kan.

Wright, Richard C., D.V.M., 1708 Humboldt, Manhattan, Kan.

Ontario Veterinary College

Cilley, George C. Jr., B.V.Sc., Concord, N. H.

Downing, G. E., B.V.Sc., 920 Barstow St., Waukesha, Wis.

Duke, F. Bennett, B.V.Sc., Delhi, Ont., Can.

Lunn, Everett C., B.V.Sc., Malta, Ill.

Parent, Murray X., B.V.Sc., Foley, Minn.

Polonsky, Arnold D., B.V.Sc., Littleton, N. H.

Savan, Milton, B.V.Sc., 467 Cypress St., Manchester, N. H.

Texas A. & M. College*

Anderson, Arthur A., D.V.M., Monticello, Ind.

Cass, Jim H. Jr., D.V.M., Box 177, College Station, Texas.

Clayton, Jack L., D.V.M., 403 Poplar St., Marshall, Texas.

Crockett, Robert M., D.V.M., 314 W. First St., Tyler, Texas.

Davis, Lavell T., D.V.M., 1434 S. Crockett, Sherman, Texas.

Derryberry, James P., D.V.M., Box 4077, College Station, Texas.

Granzin, Otto C., D.V.M., Rt. B, Miles, Texas.

Green, Joe W., D.V.M., Santa Anne, Texas.
 Grove, Gail G. Jr., D.V.M., Box, 386, Astoria, Ore.
 Kirk, Samuel K., D.V.M., Rt. No. 1, Box 72, Harrold, Texas.
 Knight, Delvin R., D.V.M., Box 1244, College Station, Texas.
 Knight, Richard G., D.V.M., Box 4187, Odessa, Texas.
 Levin, Leonard, D.V.M., 9633 95th St., Edmonton, Alberta, Can.
 Lutteman, Otto E., D.V.M., P. O. Box 628, Port Arthur, Texas.
 McMillan, Thomas O., D.V.M., Wichita Falls, Texas.
 Matthews, Will R., D.V.M., Box 485, College Station, Texas.
 Moran, Guy G., D.V.M., R.F.D. No. 2, Belton, Texas.
 Morley, William J., D.V.M., 7057 Pershing, University City, Mo.
 Palms, Ange H., D.V.M., 5823 Palo Pinto, Dallas, 6, Texas.
 Ralston, Norman C., D.V.M., Rt. No. 1, Clarks-ville, Texas.
 Rodriguez, E. Francis Jr., D.V.M., 86 Mary St., Alexandria, La.
 Sanders, Jack M., D.V.M., R.F.D., No. 4 Mar-shall, Texas.
 Schaper, Louis O., D.V.M., R.F.D. Box 307, Galveston, Texas.
 Sharp, Marion W., D.V.M., LaCoste, Texas.
 Smith, Leonard D., D.V.M., Rt. No. 1, Plains, Texas.
 Stanger, Russell S. Jr., D.V.M., Brazoria, Texas.
 Tischler, Henry, D.V.M., Box 428, College Sta-tion, Texas.
 Williams, James T., D.V.M., Frisco, Texas.
 Willis, John C., Jr., D.V.M., Box 66, Eagle Lake, Texas.
 Winne, James A. Jr., D.V.M., 638 W. 17 St., Houston, Texas.

Moran, Guy G.
 Morley, William J.
 Palms, Ange H.
 Ralston, Norman C.
 Rodriguez, E. Francis, Jr.
 Sanders, Jack M.
 Schaper, Louis O.

Sharp, Marion W.
 Smith, Leonard D.
 Stanger, Russell S., Jr.
 Tischler, Henry
 Williams, James T.
 Willis, John C., Jr.
 Winnie, James A., Jr.

Alabama Polytechnic Institute

At the commencement exercises of the Ala-bama Polytechnic Institute, on May 25, 1945, the following candidates were presented for the degree of Doctor of Veterinary Medicine:

Adams, Emory T.	Moss, Ben F., Jr.
Becton, Paul	Morgan, John W.
Bishop, William W.	Mulhern, Francis J.
Bozeman, Edward C.	Neisler, Wilbur E.
Burch, Reuben F., III	Newton, C. K.
Carlson, Edward J.	Peacock, Chas. G.
Caudle, Harold C.	Pease, Lawrence
Chapman, Cecil T.	Pope, B. A., Jr.
Cochran, Albert B.	Raines, Thomas
Derrick, Jesse D.	Roberts, James W.
Farr, Harry F.	Rosenberg, Donald W.
Fulenwider, Howard M.	Sharman, Robert S.
Gersten, Ell	Sherrill, Abner D.
Gilmore, W. H.	Sikes, James H., Jr.
Goode, Edwin R.	Silverberg, Arnold
Goodwin, Donald R.	Smith, Marvin McCoy
Grey, Ross M.	Stroup, C. W.
Hatchett, Guy P., Jr.	Sutton, Al
Headrick, Abner J.	Thompson, Leon W.
Hester, Cecil J.	Wheeler, Frank B., Jr.
Jordan, Milton T.	Whidden, James O.
Kuykendall, James C.	Williams, Augusta G.
Love, James M.	Woods, Samuel H.
Mathews, Mark W.	Young, James P., Jr.

Kansas State College

At the commencement exercises of Kansas State College, May 20, 1945, Dean R. R. Dykstra presented the following candidates for the de-gree of Doctor of Veterinary Medicine:

Allen, George W.	Holt, Joseph N.
Alter, Ralph E.	Hull, Maurice W.
Anthony, Wallace L.	Irwin, Jesse G.
Barbee, James M.	Jarrett, Robert M.
Berrier, Harry H., Jr.	Jernigan, Loyce D.
Carlson, Kenneth C.	Kelman, Alva C.
Chapman, George M.	Kendall, Orval K.
Clark, Delbert D.	Latham, Leland A.
Coles, Embert H.	Lowery, Ralph L.
Friend, Jonathan D.	McGargle, Paul F.
Goetsch, Gerald D.	Mansfield, Manford E.
Haines, Harold M.	Montgomery, Leon G.
Harold, LaVerne C.	Morrow, James F.
Hensley, Harvey J.	Mosier, Jacob E.
Holbert, Robert W.	Mullen, George A., Jr.

COMMENCEMENTS

Agricultural and Mechanical College of Texas

At the commencement exercises of the Agri-cultural and Mechanical College of Texas on May 25, 1945, R. P. Marstellar, dean of the School of Veterinary Medicine, presented the following candidates for the degree of Doctor of Veterinary Medicine:

Anderson, Arthur A.	Grove, Gail G., Jr.
Cass, Jim H., Jr.	Kirk, Samuel K.
Clayton, Jack L.	Knight, Delvin R.
Crockett, Robert M.	Knight, Richard G.
Davis, Lavell T.	Levin, Leonard
Derryberry, James P.	Lutteman, Otto E.
Grazin, Otto C.	McMillan, Thomas O.
Green, Joe W.	Mathews, Will R.

Newell, Leslie H.
Olson, Jay R.
Peterson, Duane R.
Pickard, Jesse R.
Poindexter, Alfred N.
Reagor, Harry G.
Reed, Theodore H.
Ridgway, Joe J.
Riegg, Alfred R.
Roberts, George H.
Roseberg, Arthur R.
Shannon, Stephen B.

Smith, David L.
Smith, James J.
Smith, Jean C.
Smith, John W.
Stiefel, Melvin J.
Streeter, William R.
Tuttle, Thomas W.
Ungles, James M.
Walker, Earl R.
Wedman, Elwood E.
Wreath, George C.
Wright, Richard C.

Ohio State University

At the commencement exercises of the Ohio State University, June 8, 1945, Dean Walter R. Hobbs presented the following candidates for the degree of Doctor of Veterinary Medicine:

Amstutz, Harold E.
Ashcraft, James B.
Bjornson, C. B.
Block, Lucian Paul
Buker, John Neil
Burt, Junior Lloyd
Burt, Lawrence C.
Campbell, C. L., Jr.
Clemens, P. J., Jr.
Cox, Edward B.
Culbertson, W. H.
Deacon, Howard T.
DeFrieze, George
Dern, William K.
Ernst, Walter J.
Fenstermaker, P. E.
Flagg, Dean E.
Greene, William R.
Gruesser, Franklin
Gustafson, Don Pink
Hall, Russell L.
Hartman, Fred C.
Hedges, Edgar W.
Henderson, Joshua E.
Hill, David A.
Irwin, Glenn F.
Johnston, Parke B.
Kissling, Robert E.

LaVelle, Warren J.
Lindborg, Charles L.
Lohmeier, Earl W.
McHale, Mark A.
Mossbarger, Donald E.
Nold, Max M.
Pott, Nelson A.
Raimonde, Anthony E.
Randall, Lewis B.
Rausch, Robert L.
Reichenbach, William J.
Rose, Donald E.
Roth, Albert J.
Schock, Robert C.
Shannon, Jay H.
Simmons, Carl, Jr.
Slavik, Norman R.
Sowers, Harry L.
Stearns, Daniel C.
Sturdy, Robert A.
Swinderman, Robert E.
Thomas, Charles E.
Walker, Lowell W.
Wendt, Wallace E.
Werner, Clark W.
Williams, Robert D.
Wilson, James M.
Wilson, William H.

U. S. GOVERNMENT

Report on Brucellosis.—The Bureau of Animal Industry has released a report of brucellosis work during March, 1945, which shows that there are more than one million cattle on the waiting list to be tested.

Calf vaccination is being widely used, as indicated by the fact that 42,672 calves were vaccinated during March, and only three states (Indiana, Mississippi, and Missouri) failed to use this part of the program during that month.

Want Fur Farming in the USDA.—Senate Bill 566, backed by Senators LaFollette of Wisconsin and Lucas of Illinois would place all of the functions of the Secretary of the Interior and the Fish and Wildlife Service pertaining to the fur-farming industry under the Secretary of Agriculture. The contention is that fur-farming is an agricultural pursuit. The entire industry appears to be urging the passage of the act. According to *The Fur Journal* the production and marketing of fur-bearing animals is a \$100 million industry.

AMONG THE STATES

Alberta

World's Champion Producer.—Alcartra Gerben, a Holstein-Friesian cow owned by Hayes Limited, Calgary, has produced more butterfat in one year than any other cow of any age and breed. Information released by the Holstein-Friesian Association of America, Brattleboro, Vermont, tells us that she produced 1,409 lb. butterfat from 27,745 lb. milk with an average test of 5.08 per cent.

Arkansas

State Veterinary Service Up-to-Date.—Commenting on the news item in the May issue titled "Vetoes Livestock Bill", State Veterinarian J. S. Campbell writes:—

For your information in regard to the item printed under Arkansas news, House Bill 162, creating a Livestock Commission, had absolutely nothing to do with the veterinary department of this state. It was in regard to setting up livestock shows—a state show, district show, and county show. The state later passed a bill setting up these shows only in a little different form.

In regard to your comment that nothing had been done to give the people the benefit of modern husbandry and to protect the livestock against the incubation and spread of costly plagues, kindly let me inform you of our program in Arkansas under the direct supervision of the state veterinarian: (1) Our state is entirely accredited for tuberculosis and is being kept up. (2) Our Bang's program is modernized to contain all four of the government programs. (3) We have a state rabies law calling for vaccination of all dogs within the state. (4) All milk, butter, eggs, and cheese graded in the state are under supervision of this office. (5) The poultry industry in this state is under direct supervision of State Veterinarian's office. (6) We have a dipping program of approximately 1,400 vats in operation for control of ticks and lice, under supervision of this office, the dip being furnished free by the state. (7) The last

legislature also appropriated \$25,000 additional for this office to set up a diagnostic veterinary laboratory.

I believe if you will compare this with other state programs you will find our people are very well informed.

S/J. S. CAMPBELL, *State Veterinarian.*

California

Poultry Influenza Vaccine.—Dr. J. R. Beach of the state university (*Country Gentleman*, May, 1945) has developed a vaccine that protects pullets against pneumoencephalitis (= chicken "flu"). Vaccinated at 3 to 4 months of age, trial pullets were either protected completely or suffered but mild attacks. Death losses among treated birds were small as compared with the untreated controls. On the prospect of early commercial production of the vaccine, the reporter is noncommittal, but points out that chicken "flu" is feared by poultrymen because of the toll it takes in young birds. Trials with turkeys are under way.

• • •

Vesicular Stomatitis.—The disease appeared in a herd of 130 cows in Riverside County, and marks the first appearance of it in the state. The origin of the outbreak is not known, and it has been found here only in dairy cattle and a few horses. It is so easily confused with vesicular exanthema and foot and mouth disease, that it is essential an accurate diagnosis be made at once when aphthae are found.

• • •

Personal.—Major Ernest F. Chastain (Wash., '34), of Whittier, decided that it's a small world after all, when he met two other officers from his home town upon his arrival near Kunming, China. Before he reported for active duty in March, 1941, Major Chastain was employed as veterinary livestock inspector for the California State Department of Agriculture.

Colorado

Personal.—Major James C. McIntyre (Colo., '37), of Fort Collins, is now on duty with the Chinese Combat Command. In August, 1944, he was flown over the Himalayan "Hump" and has helped to train, equip, and supply the Chinese forces used in the successful Salween campaign. Major McIntyre was engaged in research work for the U. S. Department of Agriculture, Beltsville, Md., before being called to active military duty.

Georgia

New Veterinary Research Department at Coastal Plain Experiment Station.—A new department, whose primary purpose is research in animal diseases, has been put in operation at the Georgia Coastal Plain Experiment Station at Tifton, which is part of the state

university system. Dr. Wm. L. Sippel (U.P., '40) is in charge. The need for the new laboratory arose from the tremendous growth of the livestock industry in South Georgia in the past ten years, and the idea was brought to fruition through the vision of Director George H. King and Animal Husbandman B. L. Southwell. Besides being the only veterinary research department in the state, the new laboratory, when completed, will be the first such state institution in the Southeast.

The first problems to be attacked will be the disease conditions of animals peculiar to the region and which are not being investigated elsewhere. The veterinary practitioners in the Coastal Plain area have been interviewed to determine the nature of these.

The new veterinary laboratory will also do diagnostic work for veterinarians in the area, a service which has long been needed.

• • •

Emory University to Study Animal Diseases Transmissible to Man—Veterinarian Wanted.—The Emory University School of Medicine, Atlanta, has a fund to be used for research in diseases of animals transmissible to man. A new laboratory for this work will be located on a plantation in southwest Georgia.

A qualified veterinarian is wanted to conduct the work; it is probable that some research along purely veterinary lines will also be done. Any experienced veterinarian who is interested may communicate with Director George H. King, Georgia Coastal Plain Experiment Station, Tifton, Ga., who has been asked to administer the fund and hire the personnel required.

• • •

Spotted Fever.—The first death of the year from Rocky Mountain spotted fever, in this state, occurred in an Atlanta hospital early in June. The victim was a four-year-old girl. It is estimated that only 1 in every 5,000 ticks in Georgia is infected, but last year 12 cases of spotted fever were reported.—*From Atlanta Constitution*, June 6, 1945.

Hawaii

Oriental Animal Diseases was the subject under discussion at the meeting of the Hawaiian Veterinary Medical Association, on June 21 and 22, 1945. Many of the doctors registered are members of the United States Army Veterinary Corps.

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Veterinarians Assemble.—The accompanying picture, taken in Honolulu recently, shows a group of Veterinary Corps officers and ci-
(See picture on next page.)

villian veterinarians who, it is reported, comprise one of the largest groups of veterinarians ever assembled in the Territory of Hawaii.

Illinois

The Prolific Hamster.—Being the voluntary custodians of all useful animal life, veterinari-

Army and Civilian Veterinarians in Hawaii



First row—Dr. C. E. Dow, Capt. E. B. Miller, Dr. Y. Yamashiro, Capt. C. M. Hamilton, Dr. W. H. Pang, Dr. P. T. Nomura, Dr. E. W. Willers.

Second row—Maj. R. O. Scott, Maj. R. M. Parker, Dr. L. C. Moss, Col. R. T. Seymour, Maj. J. G. Cranfield, Maj. E. F. Finke, Dr. A. A. Julien, Dr. W. R. McCall.

Third row—Capt. P. O. Enge, Lt. Col. F. L. Molt, Capt. C. R. Flickinger, Capt. F. W. Clark, Lt. L. J. Meyers, Capt. F. W. Andrews, Capt. S. A. Lovik, Dr. R. N. Beddow, Col. W. O. Kester, Dr. J. M. Hendershot, Dr. R. H. Morrison, Capt. J. L. Boydston, Capt. J. A. Rehkemper, Capt. W. W. Judson, Capt. E. H. von Glan, Capt. N. E. Johnson, Maj. E. W. Paul, Capt. C. A. Gleiser, Capt. G. T. Dalziel, Capt. H. B. Studdert.

Idaho

State Association.—The annual summer meeting of the Idaho Veterinary Medical Association was held at Salmon, June 22 and 23, 1945. The following technical program was presented:

Dr. A. P. Schneider, Boise: "Activities and Requirements of the Idaho Bureau of Animal Industry."

Captain E. A. Tugaw, V.C., Salt Lake City, Utah: "Duties of the Army Veterinarian."

Dr. Glenn C. Holm, Moscow: "Resumé of Research Work on Animal Diseases Done at the Idaho Station," and "Atonic Indigestion in Cattle."

Dr. Hadleigh Marsh, Bozeman, Mont.: "Intestinal Parasites of Sheep in the Northwest," and "Mastitis in Ewes." and "Infertility of Cattle and Horses."

Dr. A. G. Fisk, Estes Park, Colo.: "Nutrition as It Affects Veterinary Practice."

Dr. J. D. Lee, Salmon, was in charge of clinics.

s/H. F. PAGE, *Secretary.*

ans ought to know more about the hamster, the rodent scientists use in various rôles. But, caution is the word in recommending hamsters as household pets. They breed every fifteen days, and, like mice and rats, they gnaw caches for themselves. Dwellers of a Chicago southside apartment building are pestered with hamsters. One of the tenants gave a pair the run of his apartment and now the walls of the building have become the home of countless hamsters, with no remedy in sight.

• • •

Mastitis-Control Program.—Seven trained veterinarians, each working with about 50 cooperating dairymen in different parts of the state, are employed to assist with the correct-milking and mastitis-control program. They collect milk for diagnostic purposes, assist operators in formulating a program for correct milking and proper herd management, and advise them on selecting cows for treatment.

Prevention, more than cure, is proving that mastitis can be controlled.—C. S. Rhode, Urbana, in *The Country Gentleman.*

Notices a Change.—A Chicago officer of two world wars (whose name we omit), after training thousands of ground troops now scattered all over the world, writes: "Dad, veterinarians are playing an important rôle and they are well supplied for all task groups."

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The American Animal Hospital Association held a sectional meeting at the Palmer House on May 16, 1945, and invited members of the Chicago Veterinary Medical Association.

Dr. F. M. Milke, Milwaukee, Wis., opened the program with a comprehensive talk on "Canine Dystocia."

Posterior paralysis was discussed from three different angles by the following men:

Dr. C. N. Bramer, Evanston, Ill.: "Vitamin B Aspect."

Dr. W. H. Riser, Des Moines, Iowa: "Pathology, and Herniated Intervertebral Discs."

Dr. M. L. Morris, New Brunswick, N. J.: "Nutritional Factors."

• • •

Veterinary Corps Officers Meet.—The third professional meeting of the veterinary officers on duty in Chicago was held at the Chicago Quartermaster Depot on May 25, 1945, with Colonel Fred C. Waters, depot veterinarian, presiding. Fifty-one officers were present to hear Captain Robert Storm review the use of the Stader splint and, with the use of x-rays, discuss certain case histories in which the splint had been used. The lecture and case reports were supplemented by the use of two sound films obtained from the office of the AVMA on the skeletal fixation of the Stader splint. Major William C. Schofield was elected to serve as permanent secretary for the meetings.

In charge of arrangements and details for the meeting were the following committee members: Major Walter Venske, Captain Edward White and 1st Lt. Hugh P. Callaway.

s/ WILLIAM C. SCHOFIELD, *Secretary*.

• • •

Chicago Association.—On Tuesday, June 12, 1945, the members of the Chicago Veterinary Medical Association and their wives—62 in number—assembled at the Casa Nova restaurant in suburban Chicago for their annual dinner meeting. Real meat was served and everyone enjoyed an evening of food and fun.

The arrangements were under the customary efficient guidance of Dr. C. L. Miller, of Oak Park, chairman of the Entertainment Committee. He was ably assisted by Mrs. Miller, who provided numerous intriguing ways for both men and women to win special prizes of the evening. These stunts were interspersed between courses of the dinner and dancing. The meeting adjourned at a late

hour, all feeling well nourished and definitely satisfied that the past year had been one of the best in the history of the Chicago Veterinary Medical Association.

s/ W. A. YOUNG, *Secretary-Treasurer*.

Indiana

The Northwestern Association met May 23, 1945, at Rensselaer. The members and their wives sat down to a chicken dinner at 7:30, but the two groups separated for their programs.

Dr. F. C. Tucker, Claypool, Ind., discussed turkey diseases in a practical and thorough manner, and Dr. R. C. Klussendorf, assistant executive secretary of the AVMA, talked about the way the AVMA is organized and how it functions.

s/ D. S. KLINE, *Secretary*.

• • •

The Indiana-Illinois Association met in Deming Park at Terre Haute, on June 15, 1945, for their annual meeting and fish fry. Dr. G. E. Botkin, state veterinarian, discussed "New Regulations of Indiana Livestock Sanitary Board."

s/H. F. PAGE, *Secretary*.

Iowa

Recommend Reform in Abattoir Diagnosis of Hog Cholera.—The Policy Committee of the Eastern Iowa Association has addressed a letter to the chief of the Meat Inspection Division, War Food Administration, calling attention to the possibility of erring in making snap diagnoses of hog cholera in abattoir inspection in the absence of a full clinical history and antemortem examination, and to the difficulty of differentiating hog cholera from other septicemic infections even under the most favorable conditions and after careful postmortem examination, pointing out that the most experienced veterinarian refrains from jumping at the conclusion that a hog died of cholera on the basis of an autopsy alone. The suggestion is made that "septicemia" would be a more accurate diagnosis than hog cholera for these hogs which are condemned for septicemic infections, and such a diagnosis would avoid misunderstandings when the pigs involved had received the serum-virus treatment from a competent veterinarian.

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Fishery Biology and Management.—Dr. Lloyd L. Smith, research supervisor, Division of Game and Fish of the Conservation Committee of Minnesota, spoke on "The Trends of Fisheries Biology and Management" at Iowa State College, May 2.

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Outbreak of Trichinosis.—Eating insufficiently smoked sausage made from locally killed hogs

is blamed for 73 human cases of trichinosis in Lowden. The age of the victims ranged from 8 to 65. No deaths were reported.—*From Iowa Veterinarian.*

Form Breeding Societies.—"The Forming of Breeding Rings," by Dr. J. W. Pleire, of Cedar Rapids, and Dr. C. H. Banks, of Tipton, and an editorial on the subject (*Iowa Veterinarians*, May-June, 1945) again raises the question of either expanding veterinary participation in that field or standing by and allowing its exploitation to pass into the hands of lay technicians. As in the case of hog-cholera vaccination, knowledge of disease is mentioned as likely to be the deciding factor in the long run. Being too busy to take on new work will neither change the principle involved nor make it easy to take over when practice drops off. A custom established is hard to break down.

Kansas

Refresher Courses.—Preliminary plans have been made to provide courses of about four weeks each at the School of Veterinary Medicine, Kansas State College. The course will be open to veterinary officers released from active duty and to civilian veterinarians.

Kentucky

Periodic Ophthalmia.—*The Blood-Horse* for April contains a critical abstract of the article entitled "The Role of Nutrition in Equine Periodic Ophthalmia" by Jones, Maurer, and Roby, of the Veterinary Corps, which appeared in the April issue of the *American Journal of Veterinary Research*. An editor's note advises horsemen about the importance of feeding horses hay cured in such a way as to retain the maximum proportion of its vitamin content, particularly vitamin B₁₂, suggested by the authors as an important factor in ocular physiology.

Massachusetts

State Association.—The May meeting was held at the Massachusetts State College, Department of Veterinary Science, Amherst. Opening with a review of the diseases of turkeys by Dr. K. L. Bullis, of Amherst, the program was continued by Dr. H. Van Roekel, of Amherst, who presented the story of newcastle disease.

There was also a round-table discussion on subjects of interest to veterinarians.

S/ H. W. JAKEMAN, *Secretary.*

Margarine Bill Rejected.—The state legislature rejected a bill that would have permitted the sale of colored margarine to consumers and one that would have permitted public eating places to serve oleomargarine instead of butter during the war.

Honor Roll Member Passes Away.—Doctor Lester Heard Howard, Boston, died on March 30, 1945. He was in his 88th year, and was the oldest member of the Massachusetts Veterinary Association considering not only his age but also his length of membership in the Association.

Dr. Howard graduated from the American Veterinary College, in New York City, in March, 1882, and joined the American Veterinary Medical Association the same year. He maintained his membership until his death, 63 years later, becoming an Honor Roll Member in 1932.

Dr. Howard was active in his city and state, serving on many committees, commissions, and boards; in all of which he rendered capable service, reflecting credit upon himself and the profession of which he was a member.

An appropriate resolution recognizes his work and says, "The Massachusetts Veterinary Association and the veterinary profession have lost one of their most honored and respected members."

Michigan

Faculty Members.—We are in the habit of publishing pictures of graduating classes in veterinary medicine, but rarely do we have

Staff of the Surgery and Medicine Department, School of Veterinary Medicine, Michigan State College



First row (left to right)—Doctors Edw. K. Sales, C. S. Bryan, head, Surgery and Medicine Department, and John P. Hutton.

Second row (left to right)—Doctors John W. Cunkelman, F. W. Young, James H. Moser, and L. P. Hedeman. Three members of the Department are on military leave: Captains W. O. Brinker, J. M. Donaldson, and W. F. Riley.

that privilege when it pertains to the faculty of the schools of veterinary medicine. Michigan State College, one of the guardian institutes of America's livestock empire, thoughtfully sent us a picture of the staff of the

Surgery and Medicine Department, School of Veterinary Medicine, which we reproduce herewith.

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Michiana Association.—A doctor-client meeting was held at Goshen, Ind., May 10, 1945. Dr. C. S. Bryan, East Lansing, gave a complete and interesting discussion on mastitis and dairy sanitation.

The new officers of the Association are: Dr. Kenneth Frazier, Niles, Mich., *president*; Dr. Maurice Weldy, Waukarusa, Ind., *vice president*; Dr. G. W. Jeffery, Bronson, Mich., *secretary-treasurer*.

s/ G. W. JEFFERY, *Secretary*.

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Food Technology at Michigan State.—A new four-year course in food technology at Michigan State College has been announced. The curriculum as described in *Food Industries*, a monthly periodical, will be made up of subjects selected from the curriculums of the schools of (1) agriculture, (2) engineering, and (3) the arts and science. It will provide training in the technological aspect of (1) dairy manufacture, (2) handling and processing of fruits and vegetables, (3) selecting and processing meats, and (4) cereal manufacture. Chemistry, physics, biology, bacteriology, and chemical engineering, applied to the agricultural products of the human dietary, will be integrated into a specialized pursuit for college men, as one interprets the announcement.

Missouri

Veterinarians Participate in Short Course at University.—Several veterinarians participated in the Thirteenth Annual Milk and Food Control Short Course, which was held at the state College of Agriculture, Columbia, on May 2-3, 1945.

Dr. Cecil Elder, professor of veterinary science, University of Missouri, spoke on "Diseases Spread Through Milk." The paper was discussed by Dr. E. R. Price, sanitarian of the U. S. Public Health Service, Kansas City.

Dr. A. L. Bailey, chief veterinary inspector of the Kansas City Health Department presented a talk on "Municipal Meat Inspection in Kansas City."

Dr. Milton R. Fisher, chief of milk control, Division of Health, St. Louis, led the discussion on "Wartime Milk Inspection Problems," presented by Glen M. Young, milk specialist of the Missouri State Board of Health. Dr. Fisher also served as a member of the program and arrangements committee for the short course.

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National Veterinary Practitioners Association.—In a circular letter to the membership, Secretary-Treasurer J. C. Flynn announces that

the N.V.P.A., notwithstanding the cruel blow dealt by the war soon after its organization, is the second largest veterinary society in the world, that it is very much alive, and that its net negotiable assets are \$1,997.27. At a meeting of the Executive Board in May, it was unanimously agreed that the Association was doing well under the circumstances (restricted travel, gasoline, tires, labor, etc.), and it was decided to launch a nation-wide movement to overcome the evils of supply houses and drugstores which aim to have farmers dispense with the services of professional men. Dr. T. A. Sigler, Greencastle, Ind., is the president. The two vice-presidents are S. E. Hershey, Charleston, W. Va., and A. F. McGreevy, Sioux City, Iowa. The members of the Executive Board are Geo. A. Hawthorne, Clarinda, Iowa; J. E. Weinman, Lincoln, Neb.; S. L. Stewart, Olathe, Kan.; S. R. Espy, Oklahoma City, Okla., and M. N. Bader, Galveston, Texas.

Montana

Personal.—Dr. C. H. Stevens (U.P., '11) recently returned to his home in Missoula after two months in Portland, Ore., where he under-



Dr. C. H. Stevens

went an operation and hospitalization convalescence for gallbladder trouble. The accompanying picture shows Dr. Stevens ready to lead the parade on the five-gaited American saddler, "Kid Canada", at the rodeo in Hot Springs, Mont., last August.

Nebraska

Distinguished 4-H Club Members.—Arthur Else, of Buffalo County, outstanding 4-H Club member, won the trophy as junior champion in the 1944 national corn-growing contest with the record yield of 150.47 bushels per acre. The achievement along with those of A. C. Newman, Jr., of Opelika, Ala., who has earned \$6,500 in

cash prizes during eight years of 4-H Club work, is published in the May 1945 issue of the *Country Gentleman*, in an article titled "Leaders of Tomorrow."

New Hampshire

Dr. R. W. Smith, state veterinarian, Concord, spoke before the annual meeting of the New Hampshire Guernsey Breeders' Association.

New Jersey

Personal.—Dr. Meier Brodner, former inspector-in-charge of federal meat inspection at Sioux City, Ia., was transferred to Newark in March for duty in the same capacity.

Award for Research on Viruses.—Dr. Maurice R. Hilleman, of the E. R. Squibb and Sons laboratory, New Brunswick, was awarded the Howard Taylor Ricketts prize for producing an antiserum of value in identifying a group of recently discovered viruses. The work was carried out in the Department of Bacteriology and Parasitology, University of Chicago.

Object to New Race Track.—Church leaders of New Brunswick joined with representatives of Rutgers University in opposing the construction of a new race track in Raritan township, between Middlesex and New Brunswick, permission for which was granted by the state racing commission. The present law permits but four race tracks in the state and the new one is the fourth to be licensed.

New York

New York City Association.—At the meeting on May 2, 1945, Dr. H. C. Stephenson, Ithaca,



Dr. H. C. Stephenson in his capacity as clinician, at New York State Veterinary College, being assisted by an unidentified student.

presented a paper on "Penicillin," and a lively discussion ensued, with case reports by several members of the Association.

Dr. R. S. MacKellar reported on his call on the Commissioner of Health, urging that a rabies vaccination program be instituted by the Board; that vaccinated dogs be considered immunes; that they be permitted freedom in quarantine areas thirty days after vaccination; and that the ASPCA be requested to enlarge its capacity for the quarantine of dogs.

The June meeting was devoted to a round-table discussion on skin diseases. The following men participated:

Dr. L. A. Corwin, Jamaica, L. I.: "Parasitic."

Dr. B. J. Finkelstein, Brooklyn: "Allergic and Non-Specific."

Dr. M. L. Morris, New Brunswick, N. J.: "Nutritional."

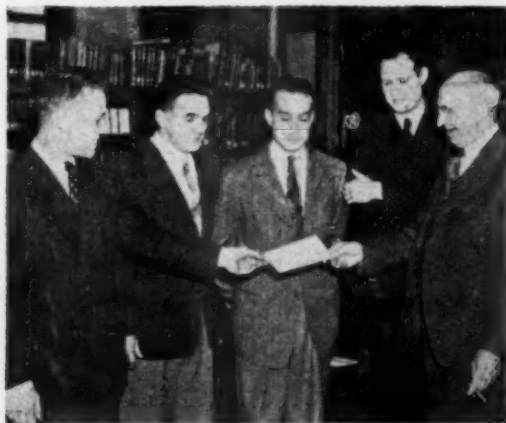
Dr. C. P. Zepp, New York: "Pyogenic and Endocrine."

Dr. Charles E. Fanslau was program chairman.

s/ C. R. SCHROEDER, *Secretary*.

Pennsylvania

C. J. Marshall Memorial Library Fund.—Students at the University of Pennsylvania, School of Veterinary Medicine, are interested



Officers of the first-year veterinary medicine class present check to Dr. E. T. Booth for the memorial library fund. They are (left to right): William D. Donovan, treasurer; Winfield H. Brady, vice president; William Kurman, secretary; and J. H. Benson, president.

in building and maintaining adequate library facilities, as is attested by the picture here presented.

Practice Act Revised.—Governor Martin signed the new veterinary practice act on April 27, 1945. It becomes effective Jan. 1, 1946. In its main features, the veterinary law broadens the definition of persons engaging in practice;

permits veterinarians, residing on the borders of neighboring states and duly licensed therein, to practice in Pennsylvania provided they do not open an office or receive calls in the latter; requires applicants for examination to be citizens of the United States; empowers the examining board to establish standards of preliminary and professional education for licensure to practice in the state, to investigate and determine acceptability of and to approve and disapprove veterinary colleges whose graduates desire to be licensed, to investigate and conduct hearings, to discipline and prosecute those guilty of illegal practices, and to revoke and suspend licenses. An important change is the procedure in case of violation of the act, making it a summary proceeding before any magistrate, alderman, or justice of the peace; conviction carries a minimum fine for first offense of \$50 and not more than \$100, and for subsequent offenses a minimum of \$100 and not more than \$500. The old law required violations to be handled as misdemeanors and therefore were difficult to prosecute.

Philippines

Dr. David Clinton Kretzer died in Santo Tomas University internment camp, another victim of Jap mistreatment. He was a native of Harristown, Ill., but moved to Fort Madison, Iowa, in 1908. Later he went to teach in the Philippines, and for several years had been connected with the Island's bureau of health, but had retired to Manila before the war started.

Puerto Rico

Trichinosis in the Tropics.—The low incidence of trichinosis in tropical countries is attributed to the relatively low consumption of meat, and the high incidence reported in the United States, for example, is obviously due to the more extensive surveys that have been carried out. The populations of the tropics consume more cereal and much less meat than do those of the temperate zones, and, especially the Spanish, habitually cook their food quite thoroughly. The disease has not been reported in Puerto Rico notwithstanding that 10 per cent of the sausage imported from the United States, picked at random in one of the largest cities, was found to contain *Trichinella spiralis*.—From the *Puerto Rico Journal of Public Health and Tropical Medicine*, March 1945.

Tennessee

Personal.—Captain Forrest A. Stepp (I.S.C., '35), of Union City, is one of the busiest men in Italy, because he and three enlisted men inspect all of the food that passes through Ration Point Number One, and also inspect civilian plants that manufacture for GI consumption. Just a few random items inspected include 1,500,000 lb. of beef a month, 9,400,000 eggs, 250,000 lb. of butter, and for Christmas 500,000 lb. of turkey.

Texas

Directors of State Association Meet.—In lieu of the regular summer meeting, which was cancelled because of the ban on conventions, the Board of Directors of the Veterinary Medical Association of Texas met at the Hotel Texas, Fort Worth, on May 30, 1945. President Charles W. Koberg, of San Angelo, presided. Among others attending were Drs. J. W. Barton, Temple; I. B. Boughton, Sonora; W. G. Brock, Dallas; Deane T. Cline, Houston; Leon G. Cloud, Fort Worth; Howard L. Darby, Fort Worth; Ray T. Dickinson, Dallas; L. M. Griffin Amarillo; Corresponding Secretary E. A. Grist, Fort Worth; H. E. Ingram, San Antonio; M. E. Maier, Orange; Fred Major, Marfa; Dean R. P. Marsteller, College Station; Chas. W. Neal, San Antonio; R. L. Rhea, San Antonio; Vice-President Hubert Shull, Texarkana; W. M. Smotherman, Huntsville; R. D. Turk, College Station; Otto E. Wolfe, Big Spring; and Secretary-Treasurer E. W. Wupperman, Austin.

Matters discussed by the Board included establishment of a full-time office; circulation and advertising policy of the *Texas Veterinary Bulletin*, official organ of the Association; membership activities; and election of executive board members.

AVMA Executive Secretary Hardenbergh, of Chicago, attended the meeting by invitation, and discussed with the Board its budget, bulletin advertising, and office set-up.

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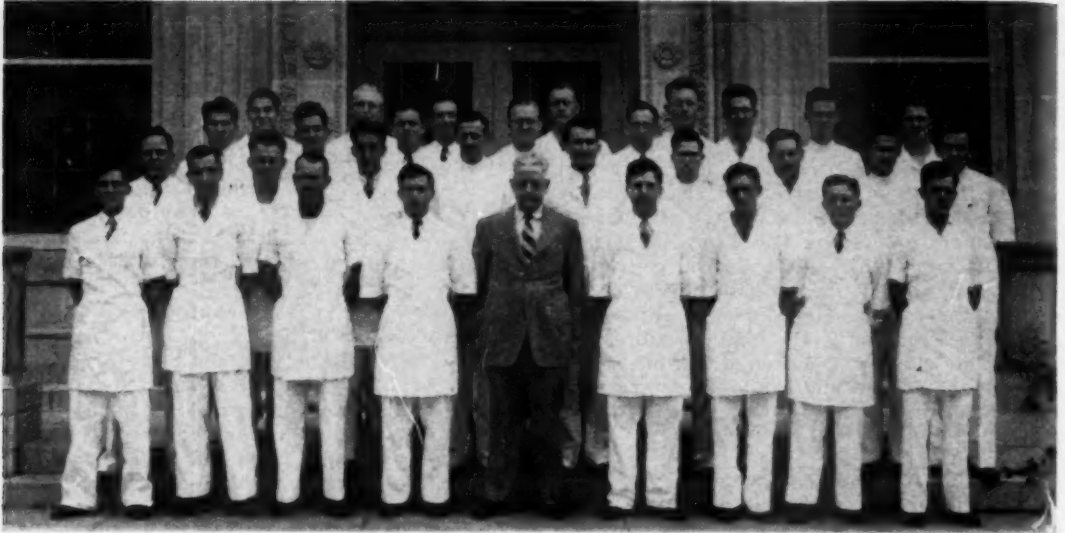
Dallas-Fort Worth Association Meeting.—Following the meeting of the Board of Directors of the state association on May 30 in Fort Worth, the Dallas-Fort Worth Veterinary Association held a dinner session at the Hotel Texas, which was attended by some fifty veterinarians and their wives. Dr. H. V. Cardona, of Fort Worth, presided as toastmaster in his inimitable style, and called upon a number of those present for brief remarks.

The Dupont sound-film, "The Story of Phenothiazine", was shown during the evening after which J. G. Hardenbergh, executive secretary of the AVMA, spoke on the present-day problems and developments of the national organization. At the conclusion of the dinner, Dr. Cardona, on behalf of the local veterinarians, presented Secretary Hardenbergh with a "Texas Stetson" as a token of friendship and appreciation.

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Bootleggers Responsible for Quarantine.—Parts of four counties (Webb, Zapata, Duval, and Jim Hogg) are under quarantine because two Mexican bootleggers with three liquor-laden ponies visited for ten days in the southern part of the state—the ponies carried infected ticks as stowaways, and dropped mature ticks all along the route. The area

Texas Agricultural and Mechanical College
School of Veterinary Medicine
 College Station, Texas
Class of May, 1945



First row (left to right)—Jack Monroe Sanders, James Jenry Cass, Jr., James Alfred Winne, Ange Howard Palms, Dr. R. P. Marsteller, Dean of the School of Veterinary Medicine, James Perry Derryberry, Jack Leroy Clayton, Norman Clark Ralston, Emanuel Francis Rodriquez.

Second row (left to right)—James Thomas Williams, Gail Garrett Grove, Joe Wright Green, Thomas Orville McMillan, Otto Carl Granzin, Leonard Delton Smith, Will Roy Matthews, Guy Garland Moran, Otto Edward Lutteman.

Third row (left to right)—Arthur Arrick Anderson, Samuel Keith Kirk, Lavell Thomas Davis, Richard Garland Knight, Marion Woodrow Sharp, Delvin Roscoe Knight, William Jarman Morley, Robert Marion Crockett.

Fourth row (left to right)—Leonard Levin, John Cornelius Willis, Russell Sharp Stanger, Henry Tischler, Louis Otto Schaper.

involved in the resultant quarantine covers 765,810 acres, on which some 25,000 head of livestock are maintained. All of these animals will necessarily be dipped every two weeks for five to nine months.—*Chicago Tribune, June 9, 1945.*

Wisconsin

Southeastern Association.—The May meeting was held at Beaver Dam, the 6:30 dinner being followed by a review of case reports on hemorrhagic septicemia by Dr. C. Vander-schaaf, Juneau. Following, was a question box and discussion of practice problems among the members.

The June meeting was held at Random Lake. Dr. J. G. Hardenbergh, executive secretary of the AVMA, outlined the program and the problems of the AVMA and its members.

s/ J. O. McCoy, *Secretary.*

Animal-Disease Control Discussed.—Dr. V. S. Larson, chief veterinarian, and Dr. J. S. Healy,

in charge of the federal livestock program in the state, met with the Committee on Disease Control and Research of the Wisconsin Holstein Breeder's Association in April to discuss health regulations affecting dairy cattle. Most of the discussion pertained to brucellosis. Vaccination by veterinarians only and systematic reports were pronounced essential to permanent success of the vaccinating program.—*From Wisconsin Holstein News.*

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Starved Prisoner, Son of Veterinarian.—The Associated Press Wirephoto Service recently carried pictures of Pvt. Joseph Demler, son of Dr. John N. Demler (C.V.C., '14), of Fredonia. When liberated March 29 from the notorious German prison camp at Limberg, Pvt. Demler was in a critical condition from starvation. Following evacuation to this country and hospitalization at Kennedy General Hospital, Memphis, Tenn., he has regained 40 pounds in about 10 weeks.

Foreign

Argentina

Foot-and-Mouth Disease Reporting Service.—The government of Argentina has issued a decree which makes obligatory the reporting of cases of foot-and-mouth disease, orders destruction of infected cattle whenever necessary, provides for isolation of infected animals, creates a fund to finance immunization, and fixes a fine up to 5,000 pesos for violation of its provisions.

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Personal.—Dr. Jose Mora, veterinarian for the famous Haras Ojo de Agua, leading Thoroughbred breeding establishment in Argentina, has been spending several months in the United States principally to study veterinary techniques.

France

Alfort Professor and Wife Jailed by Gestapo.—Arrested in her Paris home by Heinrich Himmler's Gestapo and imprisoned since 1941 in a German camp notorious for atrocities, Mme. H. Simonnet, wife of Professor Simonnet



—*Veterinary Military History*

Professor H. Simonnet as of 1918 who, with his wife, was a Gestapo victim.

of the Alfort faculty, was one of many thousands of unfortunates liberated by American troops in April. The charge was sympathizing with the De Gaulle Free French movement. Simonnet himself was jailed in Paris while his wife lingered in a horrendous camp across the Rhine.

Who is Simonnet that this one atrocity of millions is singled out to report here? The picture herewith was taken for *Veterinary Military History* (vol. 2, page 908) in 1918 while the professor was Lieut. H. Simonnet

of the French Army Veterinary Corps, assigned for duty with the American First Army as a liaison officer to help disentangle the complicated post-armistice animal situation growing out of the march to the Rhine and to a training zone in the opposite direction. Many an American veterinary officer will recall the brilliant, scholarly French lieutenant who traveled over the American sector around Bar sur Aube with the chief veterinarian of the First Army. After the war the lieutenant had gained fame as a biochemist and physiologist and was taken into the Alfort staff.

Great Britain

Unregistered Practitioners.—A recent survey made by the Royal College of Veterinary Surgeons reveals that in England about 800 unregistered persons are engaged in the practice of veterinary medicine as their sole means of livelihood. Two thirds of these are engaged in small animal work and the other third in general country practice. Two societies of the practitioners have a total membership of about 120. In Scotland, the number of such men is small. The Committee on Veterinary Practice by Unregistered Persons of the national association has recommended to the Minister of Agriculture and Fisheries and to the Secretary of State for Scotland that steps be taken to prevent further increase of this group after the war. The number of registered practitioners is about 2,000.—*From The Veterinary Record.*

India

Special Issue of the Indian Veterinary Journal.—The January, 1945, issue of this publication is designated "Veterinary Education Number," and contains a number of articles concerning education. The symposium includes opinions from faculty members, practicing veterinarians, public health officials, army veterinarians, and representatives of animal husbandry.

The discussion begins by stressing the fundamental importance of the veterinary profession for the well-being of man and the progress of his civilization. Other thought-provoking statements included are, in effect, that the efficiency of a college depends more on the quality of its staff than on its curriculum; that students should only be admitted if they have a wide general education and can produce proof that they have worked with, and have an interest in, animals; that the livestock industry and veterinary education are so interrelated that one cannot be separated from the other; that a "do more see more" program of clinical work is more valuable and impressive than book reading; and that the main object of veterinary education in India is to build a good herd of cattle all over India.

Japan

Kamikase, like *quisting*, is one of those forceful words that great wars implant in every mind for keeps. It's neither Germanic nor funny. In their dictionary, the Japanese define it as "floating to heaven", and they use it officially as the name of their suicide bombing service. The lone pilot of the *kamikase* arm, after three months of intensive training and a solemn ceremony, takes off for a one-way journey to "that house not made with hands, eternal in the heavens," never to return. Suicide bombing is more than a crazy last resort of an aggressor nation going down in defeat, for unless countered effectively by new strategy and tactics, it can interpose tremendous new difficulties for the United States and Allied forces in bringing Japan to terms, according to capable authorities. No, my friends, *kamikase* is not the name of a new brand of cheese. Those "in the know" are not trying to laugh it off, but see considerable hope in the fact that the pilot is locked in the plane and the landing gear dropped to make sure that the poor dupe will not change his mind.—*Anon.*

Russia

Prodigious Dog.—Dogs of the K-9 corps are said to be proficient detectors of land mines strewn by the enemy along the lines of march of offensive armies. They are trained to use their keen sense of smell to locate the spot where mines are buried. But, the most phenomenal of all war dogs yet trained for this yeoman service is Zhuchka, a mongrel of the Russian army, which is credited with having located 2,000 mines in eighteen days. A special dispatch to the *Chicago Sun* credits Russian war dogs with having located over a million land mines during the war. Zhuchka is so proficient that he is flown from place to place with his master in the line of duty.

STATE BOARD EXAMINATIONS

Iowa—The Iowa Veterinary Medical Examining Board will hold examinations for the licensing of veterinarians on Sept. 4-5, 1945. Applicants are asked to be in the office of the Division of Animal Industry, State House, Des Moines, not later than 8:00 a.m., Sept. 4. Address further inquiries to C. C. Franks, chief, Division of Animal Industry, State House, Des Moines 19, Iowa.

COMING MEETINGS

Vermont Veterinary Medical Association. Morrisville, Vt., July 28, 1945. G. N. Welch, 43 Union St., Northfield, Vt., secretary.

Short Course for Veterinarians. Purdue University, Lafayette, Ind., Oct. 11-12, 1945. C. R. Donham, Dept. of Veterinary Science, Purdue University, Head.

American Veterinary Medical Association. Business sessions only of Executive Board and House of Representatives. Palmer House, Chicago, Ill., Aug. 20-22, 1945. J. G. Hardenbergh, 600 S. Michigan Ave., Chicago 5, Ill., executive secretary.

BIRTHS

To Dr. (K.S.C., '41) and Mrs. George W. Eberhart, 3533 80th St., Jackson Heights, N. Y., a daughter, Narcee Janet, Feb. 3, 1945.

To Dr. (Colo., '40) and Mrs. John E. Ketcham, Box 907, Gillette, Wyo., a son, John Edward II, Feb. 5, 1945.

To Dr. (Wash., '44) and Mrs. Richard Dubig, 516 E. First St., Port Angeles, Wash., a daughter, Pamela Ann, April 10, 1945.

To Dr. (M.S.C., '41) and Mrs. Norman J. Glucksman, Box 392, Amery, Wis., a daughter, Judith Ann, May 19, 1945.

To Lt. (Tex., '43) and Mrs. William J. Kelber, 384 E. 6th St., Pomona, Calif., a son, Richard Stanley, June 3, 1945.

DEATHS

Ben W. Creel (A.P.I., '25), 45, Mobile, Ala., died Sept. 12, 1944. Dr. Creel was milk inspector for the City-County Board of Health at Mobile, at the time of his death. He was admitted to the AVMA in 1938.

Thomas J. Eagle (K.C.V.C., '03), 67, Kansas City, Mo., died April 29, 1945. He had retired from the Bureau of Animal Industry, April 1944, after devoting forty years of his life to that service. He was admitted to the AVMA in 1917.

A. J. Kline (Ont., '94), 73, Wauseon, Ohio, died recently at his home. Dr. Kline began his practice in Wauseon in 1896 and became prominent not only in the field of veterinary medicine but was also active in civic affairs.

Mrs. J. V. Miles, 47, wife of Dr. J. V. Miles, of Ellendale, N. D., died March 12, 1945.

John S. Pollard (Ont., '98), 76, Providence, R. I., died May 29, 1945. Dr. Pollard was born at Ashton, R. I., Feb. 1, 1869, and came to Providence in 1898, following his graduation. He was appointed state veterinarian in 1899, and resigned in 1922 to enter practice. It was partially through his efforts that the State Board of Agriculture was founded. Dr. Pollard had been a member of the AVMA since 1910.

Arthur Spitz (U.P., '07), 60, Dobbs Ferry, N. Y., died April 3, 1945. Dr. Spitz had been a member of the AVMA since 1918.

THE VETERINARY PROFESSION AND THE WAR

Early Discharge of Veterinary Officers Unlikely—Surgeon General

Substantial releases of Army Medical Department personnel will not take place before the latter part of 1945, according to an announcement made by Surgeon General Norman T. Kirk on May 31, in stating a policy on discharges in conformity with War Department procedures. This is due to the fact that the peak of the Medical Department's activities will not be reached until fall.

In formulating the policy, consideration was given to civilian needs for professional medical, dental, and veterinary care without weakening military needs. Other factors considered were the length of time necessary for personnel to complete their work in the Mediterranean and European Theaters and return to the United States; replacement of Medical Department personnel in active theaters by those who have not had overseas duty; necessity for the maintenance of a high standard of medical care and other needs both in Europe and the Pacific.

Regarding Veterinary Corps officers, the statement of policy reads as follows: "Since there are insufficient officers to meet the present requirements, it is not contemplated that any officers will be released from the service."

For medical and dental officers, the policy statement provides that officers whose services are essential to military necessity will not be released; officers above 50 years of age whose specialist qualifications are not needed within the Army will receive a high preferential priority for release from active duty, and that adjusted service ratings will be used as a definite guide to determine those who are to be separated.—*From News Notes No. 21, May 31, 1945, Technical Information Division, Office of the Surgeon General.*

Veterinary Officer Receives Legion of Merit

The Legion of Merit was awarded by the Commanding General of the United States Forces in the India Burma Theater on Dec. 11, 1944, to Major John S. Haley, V. C., "for meritorious service while serving as Veterinary Liaison Officer of the 38th Division, Chinese

Army in India, during the period 5 October 1943 to 15 August 1944."

Major Haley received his veterinary degree from Kansas State College in 1938, and "by his constant and unselfish attention to duty, materially assisted the Chinese Commander to keep to a minimum the incidence of animal illness. His outstanding work contributed substantially to the successful conquest of the Mogaung Valley."

Veterinary Unit Awarded Meritorious Service Unit Plaque

The 1798th Service Command Unit, Station Complement, Headquarters Detachment, Veterinary Section, Fort Des Moines, Iowa, was awarded the Meritorious Service Unit Plaque on April 7, 1945, "for superior performance of duty in connection with food inspection activities throughout the State of Iowa during the last four years."

The award goes on to say: "The efficiency and speed with which the personnel of this section accomplish their food inspection duties despite distance, weather conditions, long working hours, and ever changing contract and specification requirements is worthy of commendation."

"The superior standards of discipline, morale and military and professional efficiency maintained by this section indicate that this award is well earned."

Veterinary Officer Retires

The Office of the Surgeon General has advised us that Col. Harry L. Watson, V. C., has completed his term of service, and we herewith present his service record.

COLONEL HARRY L. WATSON was born Feb. 2, 1894, at Breckenridge, Mich. He received his degree of Doctor of Veterinary Medicine from the Grand Rapids Veterinary College in 1916. He was commissioned a 2nd Lt. in the Veterinary Reserve on Oct. 9, 1917, and was ordered to active duty July 18, 1918, serving at the A.R.D., Camp Shelby, Miss., Camp Jackson, S. C., Camp Upton, N. Y., and Camp Gordon, Ga. On Sept. 16, 1920, Colonel Watson accepted a commission as 2nd Lt. in the Veterinary Corps, Regular Army. He graduated from the Army Veterinary School in 1922. He served a tour of duty in the Philippines and in Hawaii and at various stations within the United States, in-

cluding Fort Francis E. Warren, Wyo., Colorado Springs, Colo., Fort Sill, Okla., and Fort Huachuca, Ariz. Colonel Watson attained the rank of colonel on July 18, 1944. He was on duty at Fort Lewis, Wash., in 1943, when he was assigned to duty in the South Pacific. He was returned to the States the latter part of December, 1944, due to physical disability, and was retired on April 30, 1945.

Veterinary Officers Promoted

Blakeley T. Deal (U.P., '37), of Philadelphia, Pa., Harry J. Robertson (U.P., '39), of National Park, N. J., and Rowland W. Rushmore (I.S.C., '39), of Atlanta, Ga., have been promoted from the rank of major to lieutenant colonel in the Army Veterinary Corps, according to information released from the Surgeon General's Office under date of May 31, 1945.

Preference Rating of Veterinarians for Auto Tires

In recent weeks, there has been some apprehension concerning the "Group II" classification of veterinarians on the "Preference List of Passenger Car Services" used by ration boards when issuing authorization for tires for passenger cars. Inquiry from the Office of Price Administration, in Washington, has elicited the following explanation from Mr. Lee A. Brown, acting chief, Tire Rationing Branch:

"Group II of the Preference List is the 'Essential Services' group. Group I, with the exception of several vital services such as mail delivery and those to provide for religious needs, consists almost entirely of passenger cars needed to cope with emergency situations. Most of these services involve the use of a passenger car at high rates of speed in answering emergency calls. Others involve travel to establishments with production emergencies which directly affect the armed forces. All essential passenger car services for which preferred mileage may be issued under the gasoline regulations are in Group I and II.

"The importance of veterinarians in aiding the livestock industry in the control of disease and in furthering the production of animals and poultry has been recognized to the extent that they have been listed among those essential services for which unlimited mileage may be obtained to carry on the services. Subsequently, they are listed among the essential services in Group II on the Preference List.

"Recent information from the Rubber Bureau of the War Production Board indicates that increased allocations of passenger tires for rationing will enable all needs of Group I and II operators to be met with little or no delay. Inclusion in Group I as emergency vehicles,

therefore, will not be necessary to assure adequate tires for veterinarians."

Subsequently, another letter from Mr. Brown stated as follows:

"Group I of the Preference List consists almost entirely of passenger cars needed by persons to enable them to cope with emergency situations. Having received information that many farm veterinarians are engaged in services of an emergency nature, this office is taking steps to include in Group I of the Preference List passenger cars necessary for such services to be regularly rendered. The determination of whether a passenger car is necessary for the services to be rendered, the relative essentiality of the services as compared to those of other Group I applicants before the Board and the actual need for replacement of tires will be made by Local Boards as required by the tire regulations.

"Information on this classification change is expected to reach our Boards in about ten days."

Died in Military Service

The following officers of the Veterinary Corps have made the supreme sacrifice. They have died since Jan. 1, 1943, while in the military service. The information comes from the Office of the Surgeon General.

Lt. Colonel H. L. Anderson, born Nov. 20, 1889, graduated from Ontario Veterinary College in 1916. Was stationed at Camp Butner, N. Car., at the time of his death on March 1, 1944, of natural causes.

Captain Dell C. Bassett, born Nov. 27, 1899, graduated from Cornell University in 1925. Died at Tilton General Hospital, Fort Dix, N. J., on Jan. 10, 1945, of natural causes, following return to the United States from the European Theater of Operations.

Captain Paul C. Garner, born March 25, 1908, graduated from Iowa State College in 1937. Last stationed at Camp Campbell, Ky., with the 20th Armored Division. Died at Percy Jones General Hospital, Battle Creek, Mich., on Oct. 30, 1943, of natural causes.

1st Lt. Leo H. Hartman, born Oct. 11, 1907, graduated from Ohio State University in 1931. Killed in airplane crash on Dec. 29, 1944, while on duty in Alaska.

1st Lt. James Kral, born July 15, 1913, graduated from Kansas State College in 1935. Last stationed with 23rd Veterinary Station Hospital, Fort Bliss, Texas. Killed July 28, 1943, in plane crash at Biggs Field, Texas.

1st Lt. Herman L. Moser, born Sept. 10, 1911, graduated from Ohio State University in 1936. Last stationed with 23rd Veterinary Station Hospital, Fort Bliss, Texas. Killed July 28, 1943, in plane crash at Biggs Field, Texas.

Captain Dale J. Yokum, born August 18, 1916, graduated from Kansas State College in 1940. Transport veterinarian. Died at sea Jan. 29, 1944.

JULY

AUGUST

SEPTEMBER

are the months in which serious outbreaks of

Equine Encephalomyelitis

have occurred.

Available information shows that the disease was at least 300% more prevalent in 1944 than in 1943, indicating that the cycle of its occurrence is swinging upward and that a widespread outbreak is a real danger this year. Already numerous scattered cases have been reported by practitioners.

So far preseasonal immunization has been normal, but it has not increased in keeping with the increased danger of a widespread outbreak. It is the obligation of veterinarians to advocate preseasonal immunization, because if a great panzootic should occur, there are not enough practitioners available to handle the situation without neglecting other important work.

As an aid in stimulating extensive preseasonal immunization against this potentially dangerous disease we are engaging in a widespread publicity campaign through farm papers and magazines covering the country from Ohio to the Pacific coast. These publicity articles emphasize the danger from encephalomyelitis in 1945 and point out that immunization work must be done by veterinarians.

The farm papers used for this advertising are:

Weekly Kansas City Star
Prairie Farmer
Wisconsin Agriculturist
The Farmer
Wallace's Farmer
Dakota Farmer
Western Farm Life
Nebraska Farmer
Texas Farm and Ranch
Pacific Rural Press

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On Range or Farm or Feedlot



Jen-Sal

BLACKLEG BACTERIN

ALUM PRECIPITATED

A product that brings immediate client approval because of its distinctive packaging and dependability.

An increasing number of veterinarians specify Jen-Sal Blackleg Bacterin prepared by the special cultural methods developed by Scott, featuring low toxicity, prolonged absorption and maximum antigenicity.

Supplied in Jen-Sal's breakproof round cartons with tin tops and bottoms at the "live and let live" price of 4 cents per dose, less usual discounts, in 10-dose and 50-dose vials.

Vial 50 cc. (10 doses) . \$0.40
(Code: Herford)

Vial 250 cc. (50 doses) . \$2.00
(Code: Redpol)

JENSEN-SALSBERY LABORATORIES, INC.

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